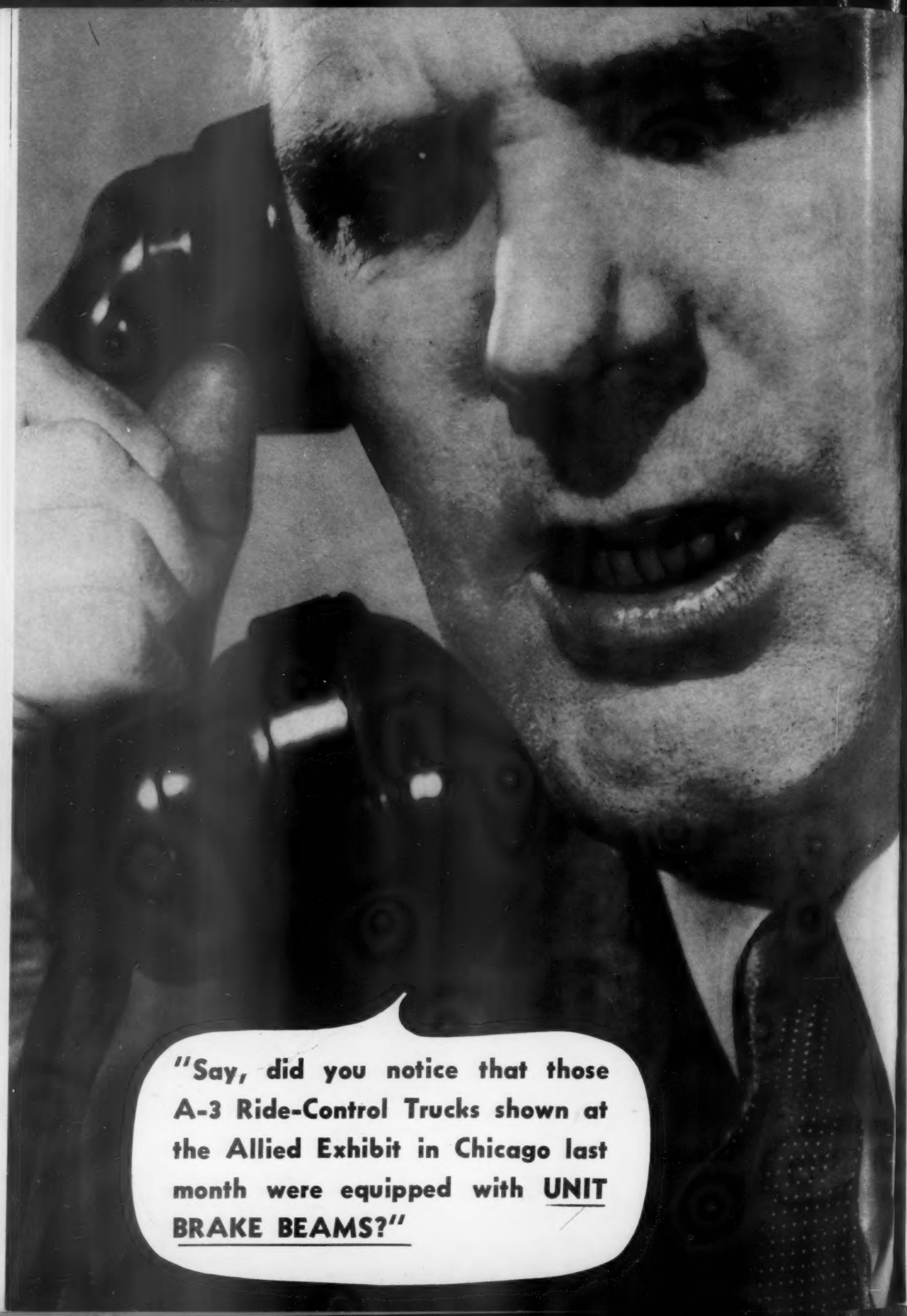
OCTOBER 12, 1946

Railway Age

Founded in 1856


"Say, did you notice that those A-3 Ride-Control Trucks shown at the Allied Exhibit in Chicago last month were equipped with UNIT BRAKE BEAMS?"

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NEW POWER PLANT

How This Control System Operates

As the engineer notches up the *THROTTLE*, an electric signal is flashed through the *ENGINE CONTROL PANEL* to the *GOVERNOR*. The *GOVERNOR* does the rest. Automatically, new fuel and current limits are set. Automatically, more oil is fed to the diesel engine. Automatically, generator excitation is increased. More power flows from the main generator to the traction motors; smoothly the train gathers momentum.

In a similar manner, the *GOVERNOR* acts automatically to hold engine speed constant in spite of changes in load or in the engine's ability to deliver power. In this case, however, the *TACHOMETER GENERATOR*, not the *THROTTLE*, energizes the *GOVERNOR*.

Thus, when the *TACHOMETER GENERATOR* signals that speed is low, the *GOVERNOR* increases the amount of fuel fed to the engine. If this action does not bring speed up to normal, the *GOVERNOR* then decreases excitation of the generator to unload the diesel and allow it to regain speed. Opposite action occurs when less speed is needed.

At all times, control exercised by the *GOVERNOR* is so fast and so precise that the engine can be operated at its optimum speed and load without danger of overspeeding or harming the engine. Regulation is within plus or minus one-half of one per cent.

LOAD CONTROL!

This Accurate Regulating System Helps Improve Engine Performance, Reduce Maintenance, Increase Life of Equipment.

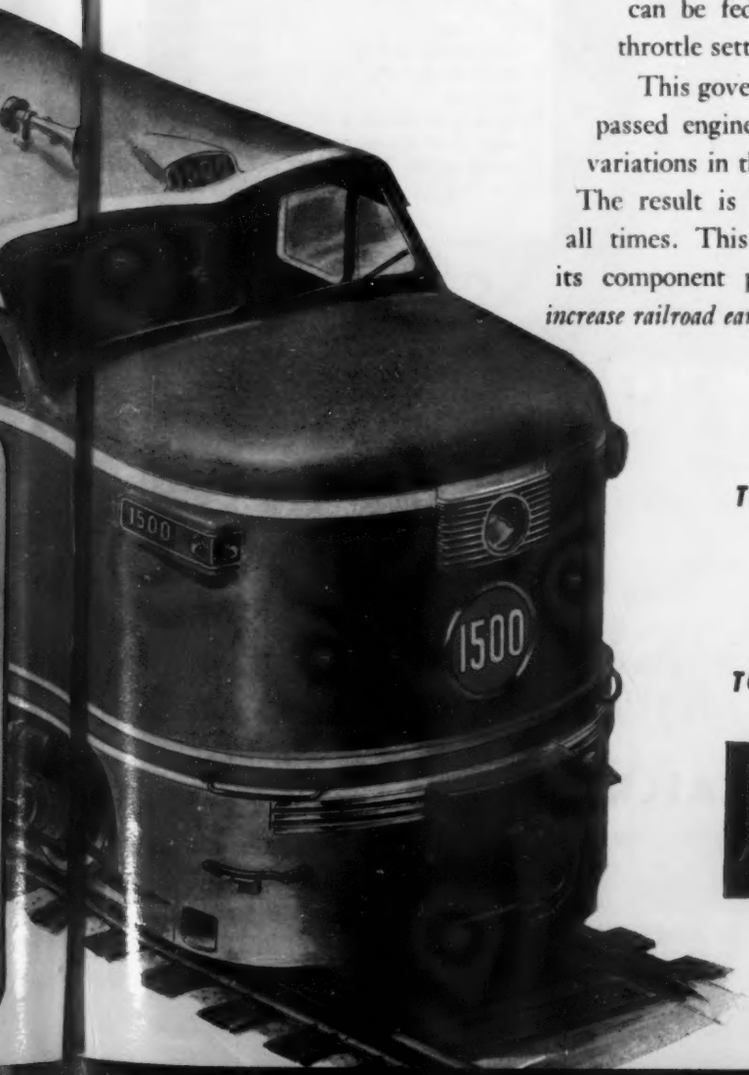
Controlling the 1500 horsepower of the new Alco-G.E. diesel-electric road locomotive is a new power plant regulating system so responsive—so fast and precise in its operation—that it actually *anticipates* a change in load on the diesel engine . . . and automatically corrects for it before the change can affect the speed of the engine!

As a result, engine speed is held more nearly constant—at the rate called for by the throttle—than is possible with a conventional governor. This means improved performance—more economical operation.

Nerve center of the regulating system is the new electric governor. Energized by a tachometer generator, whose output is proportional to the speed of the diesel engine, this governor transforms electric impulses into mechanical action to control the fuel racks—and hence the speed—of the engine.

But this control system does far more than merely hold engine speed constant. In addition, it quickly and automatically adjusts generator demand to correspond with the engine's ability to deliver power. It limits maximum amount of fuel that can be fed to the engine at any given throttle setting. It limits generator output.

This governoring system insures unsurpassed engine performance regardless of variations in the demands placed upon it. The result is top-flight performance at all times. This diesel-electric—like all its component parts—is *really built to increase railroad earning power.*



THE NEW ALCO-G.E. "1500"

Built

TO INCREASE RAILROAD EARNING POWER

AMERICAN LOCOMOTIVE and GENERAL ELECTRIC

113-173-9580

As in practically every other line of business, the cost of running a railroad has been steadily rising during recent years.

Wages, by far the largest single item in railroad costs, now average 53% more than they were just before the war. Prices of materials, supplies and fuel — the second largest item — are up 47%.

But while operating costs have been rising, the cost of the capital it takes to build and improve railroads has been going down. Railroad managements have been alert to opportunities to retire indebtedness, or refund it at lower interest rates. As a result, fixed charges on the capital invested are less today than they were in 1912—although investment in railroad plant has almost doubled since then.

The big part of the cost of running a railroad is the operating cost. The cost of the capital is the lightest part of the load.

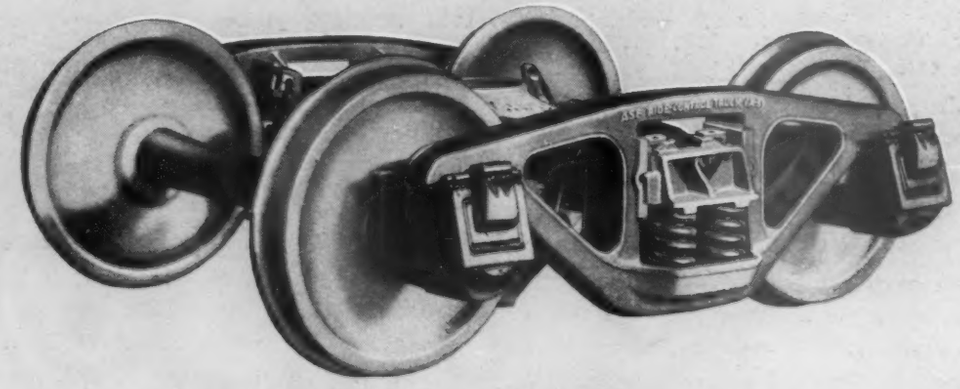
ASSOCIATION OF **AMERICAN RAILROADS** WASHINGTON 6, D. C.

IN PARTNERSHIP WITH ALL AMERICA

Acceptance

Two-thirds of all the American Railroads using Ride-Control Trucks have already re-ordered—one as often as 12 times.

More than 38,000 sets of this easy-riding truck are in service or on order for 64 railroads and private car owners. Ride-Control is the modern truck for all loads, all speeds, all needs.



A·S·F *Ride-Control* TRUCK

NO SPRING PLATES • NO SPRING PLANKS

LONG SPRING TRAVEL • CONSTANT FRICTION CONTROL

AMERICAN STEEL FOUNDRIES

MINT-MARK OF ⬡ FINE CAST STEEL

For renewing the old

Plymetl FITS THE

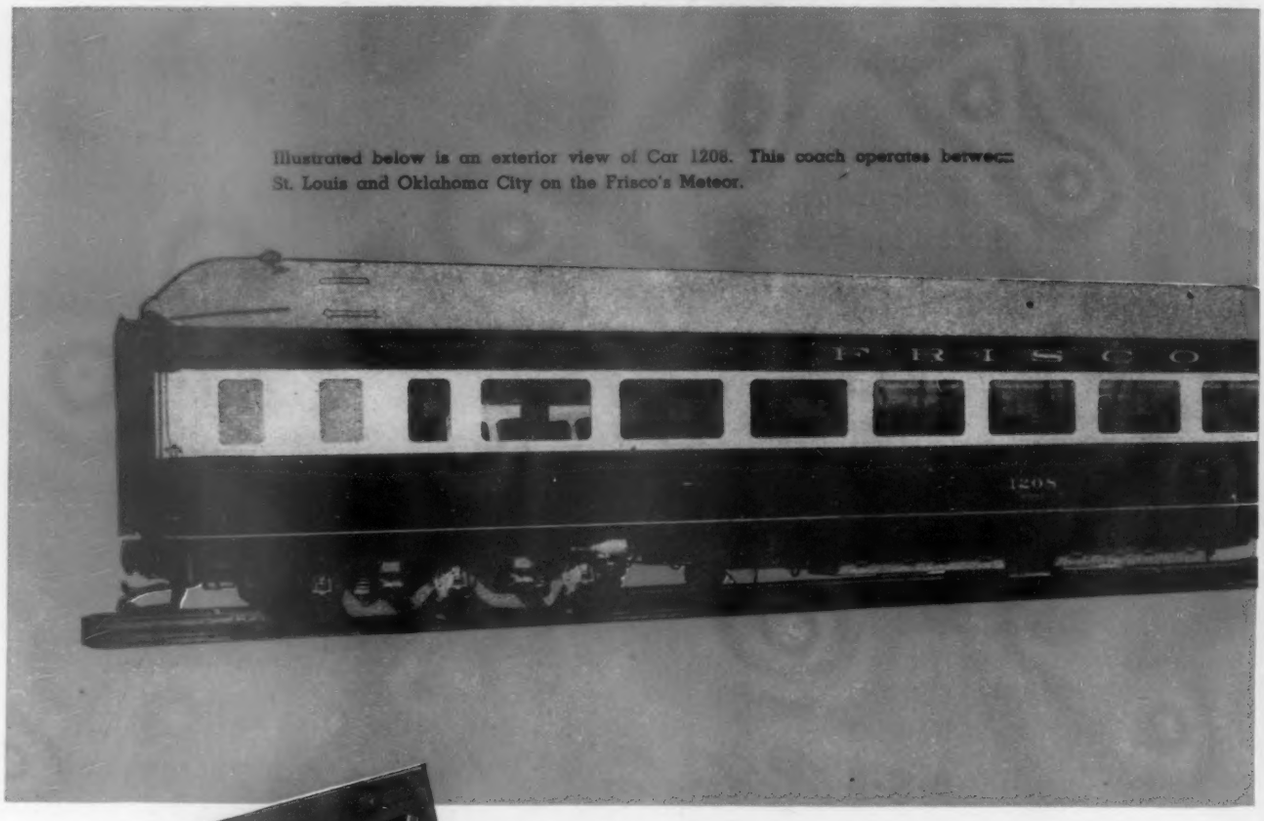
When the St. Louis-San Francisco Railway rebuilt cars 1203, 1207, 1208 and 1213, the inside finish was provided by Haskelite. PLYMETL was specified for doors (interior, end and vestibule); partitions, bulkheads, pier panels, upper and lower wainscoting, and end panels. Other Haskelite materials were specified for upper deck panels, air ducts and floors.

Frisco men estimate that in Car 1208 (illustrated) considerably more than 7500 pounds were saved by using Haskelite interior finish instead of hollow-steel partitions and paneling. Weight saved by Haskelite floor construction alone was 1400 pounds. And this weight saving was accomplished without sacrificing safety.

The "Frisco" railroad was so well pleased with the performance of Haskelite materials in the rebuilt cars that they have been specified for the same applications in 38 new streamlined cars now on order. The "Frisco" anticipates an equal or greater saving in weight in these new cars. In a 12 car train, this means a weight saving of more than 45 tons. Here, indeed, is proof of the "light touch" of PLYMETL.

PLYMETL — The metal-clad plywood.

Illustrated below is an exterior view of Car 1208. This coach operates between St. Louis and Oklahoma City on the Frisco's Meteor.



Write for *"Plan with Plymetl"*

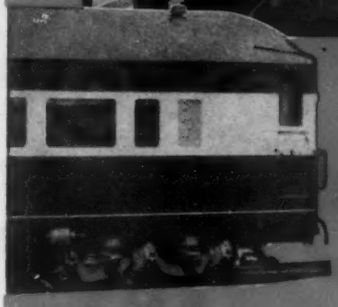
The new "Plan with Plymetl" catalog contains complete information on use, fabrication, fastening, and finishing of Plymetl. Write for your free copy today.

or building the new

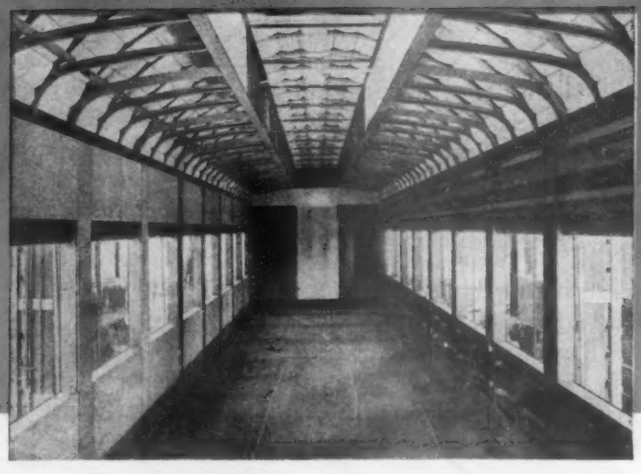
PICTURE

The view below shows one end of the interior of Car 1208 with Plymetl bulkhead installed. Plymetl wainscoting and pier panels are in the process of installation.

The interior view above shows modern appearance of Car 1208. Note the smooth surface of the upper deck panels.



The other end of this car is pictured at the right. Plymetl bulkhead, pier panels and wainscoting illustrated.



HASKELITE MANUFACTURING CORPORATION

Department RR-11 **Grand Rapids 2, Michigan**

NEW YORK CHICAGO DETROIT CLEVELAND ST. LOUIS PHILADELPHIA LOS ANGELES

CANADA: Railway & Power Engineering Corporation, Ltd.

Laying pipe's a "pipe" with this equipment

NORTHERN PACIFIC *right-of-way near Duluth, Minn. Installing 40 feet of culvert tile in 9-hour day. Tractor uses about 1 gallon of 8½c fuel in an hour.*

A BULLDOZER at the front—a Hyster winch at the back—and a special demountable boom for operating drag-line. . . . Tie these up to the power, traction and maneuverability of a rugged "Caterpillar" Diesel Tractor, and you have one of the most versatile, fastest working rigs for right-of-way maintenance ever devised.

Reaching "in and under" to excavate dirt—spreading and back-filling—moving and placing heavy pipe. . . . These and many other jobs (like ditch cleaning, bank sloping, shoulder building, ballast spreading) are really a "pipe."

And—"Caterpillar" Diesels are virtual Methuselahs of long tractor life, as you'll find when you see the hour meter measuring out their many thousands of work hours.

Your "Caterpillar" dealer has some "eye-opening" facts about these husky work units—and about the efficient service behind them.

CATERPILLAR TRACTOR CO. • PEORIA, ILLINOIS

CATERPILLAR DIESEL

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ENGINES • TRACTORS • MOTOR GRADERS • EARTHMOVING EQUIPMENT

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Steel for
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REFRIGERATOR
REFRIGERATOR

These Little Spuds go to Market . . . . .

Riding the rails to the freight sidings of Everytown, U.S.A. . . . 18,000,000 tons of them every year. Potatoes . . . a staple food of the best-fed, best railroad-served nation on earth . . . from the rich acres of Maine, Idaho, California and Long Island.

And to make his trip to market not only a fast but a pleasant one, Mr. Spud gets careful temperature conditioning in his "highballing" refrigerator car . . . arriving at destination in all his earthy freshness.

a.c.f., with the cooperation of the railroads, is continually developing more modern rolling stock . . . for still better delivery of the nation's freight . . . for still more attractive service to the travelling public.

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NEW YORK
CHICAGO
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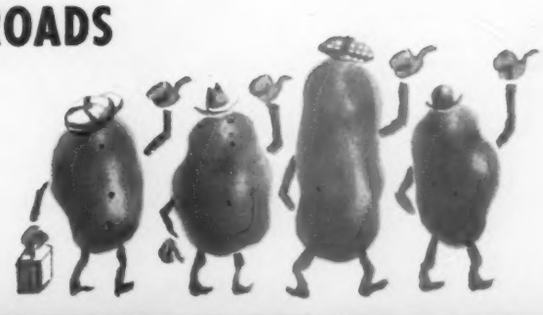
PITTSBURGH
SAN FRANCISCO

a.c.f.

CAR BUILDERS TO AMERICA'S RAILROADS



WHY THIS PERFORATED ARMCO PIPE ASSURES POSITIVE ROADBED DRAINAGE

20′ Lengths

Tight Couplings

Drainage Efficiency

Ample Strength

This is a simple way of illustrating the great strength of corrugated metal pipe. In the case of rigid pipe, the load is concentrated at the top and bottom, while corrugated pipe distributes the load *uniformly around its circumference.*

These are four important reasons why ARMCO Perforated Pipe gives quick, positive drainage where ballast pockets prove troublesome.

Long lengths mean there is less chance for your subdrainage systems to get out of order because of localized soil-shifts. Strong, tight, bolted joints hold the 20′ sections *securely together*. Individual sections of pipe don't get out of line.

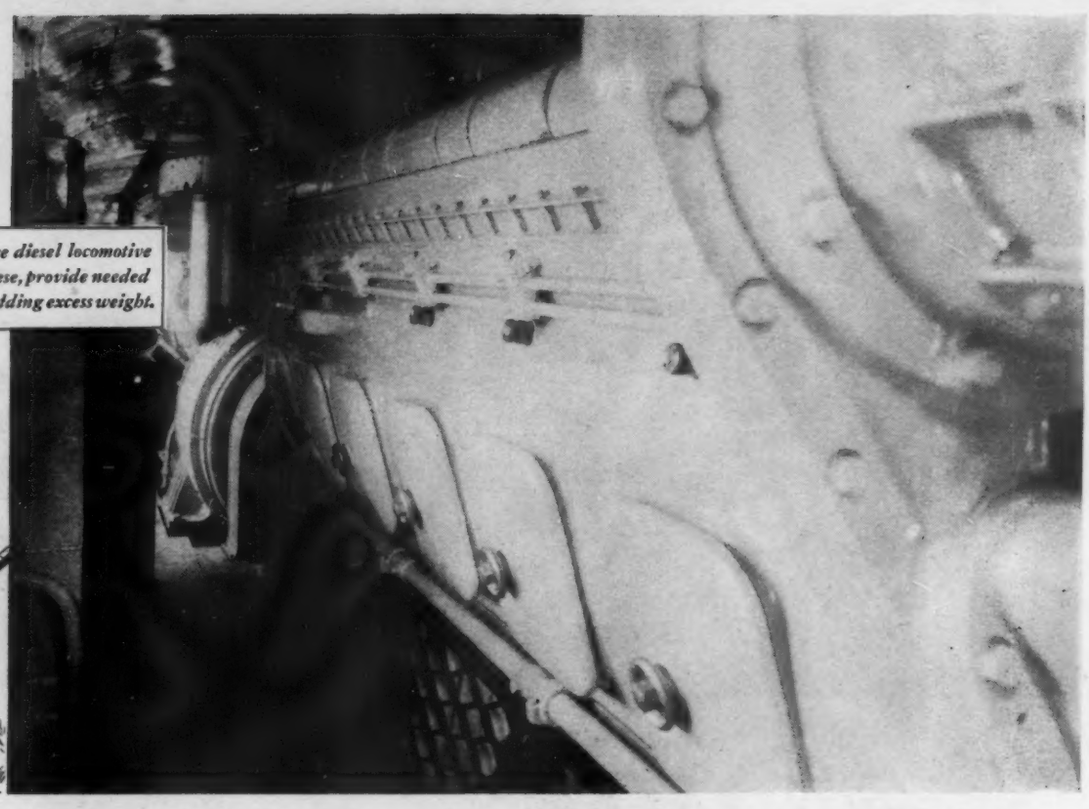
ARMCO Pipe is corrugated for high inherent strength. It also has the ability to deflect slightly under loads. This compresses the soil at the sides and tends to equalize the pressure around the entire pipe, thereby increasing its load-carrying capacity. The small, evenly spaced perforations in ARMCO Pipe admit the water freely but exclude the surrounding backfill.

Stabilized with ARMCO Perforated Pipe, your roadbeds need less maintenance. Costs go down. Speed restrictions are lifted. Ballast pockets are completely drained.

For complete information about ARMCO Perforated Pipe, write your nearest Armco Drainage & Metal Products, Inc. office—or the general offices of the company, 3525 Curtis Street, Middletown, Ohio.

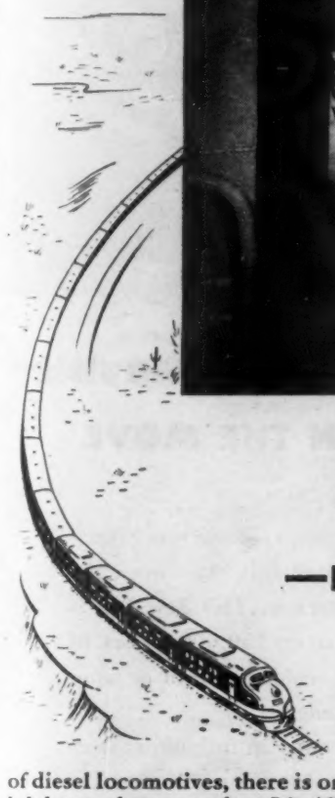
ARMCO

Armco Drainage & Metal Products, Inc.



Alloy steels in huge diesel locomotive engines, such as these, provide needed strength without adding excess weight.

FOR DIESEL WORKING PARTS
—no other material can equal ALLOY STEELS



For crankshaft, connecting rods, piston pins, gears, axles, bearings and other working parts of diesel locomotives, there is one material that can do the job better than any other. It's Alloy Steel—and here's why:

1. Alloy Steel is exceptionally strong and tough. Its high strength-to-weight ratio provides extra strength in high-speed, heavy-duty locomotives without adding excess weight.

2. Alloy Steel responds uniformly to heat treatment. It has a greater range of hardenability than any other material—produces hard, wear-resisting surfaces for bearing areas.

3. Alloy Steel resists fatigue. It is indicated for all parts subject to recurrent strains or to sudden, repeated reversal of stresses.

4. Alloy Steel resists wide variations in temperature—desert heat or sub-zero cold.

5. Alloy Steel saves money in the long run—through increasing life of working parts and keeping equipment out of repair shops and in service.

For efficiency and economy, Alloy Steels should have an important place in every railroad equipment program. And Republic—world's leader in alloy steel making—is qualified to help you find that place in *your* program. Write us.

REPUBLIC STEEL CORPORATION
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NEW

"D-R" V-BELTS

HELP KEEP BUSINESS "MOVING" WHILE ON THE MOVE

Put a businessman in this conference room car, provide him with lots of light plus plenty of conditioned air and his patronage is yours.

Equip this car's V-Belt axle drive with the new Dayton "D-R" V-Belt and you have the most dependable, efficient device known for the transmission of adequate power.

This new Dayton "D-R" V-Belt, thanks to war-born research, has stronger fabrics, improved long-life compounds and new construction principles. Yes, it is a far better belt than even the famous "D-R" V-Belt, prewar. This new belt is designed to give well over 150,000 miles of service. Dust, dirt, heat, cold, ice, rain or snow do not affect its performance.

Write today to get the story in full, direct from a Dayton Railway Specialist. You will find the time you spend with him worth while.

THE DAYTON RUBBER MANUFACTURING CO. • DAYTON 1, OHIO

Advantages of the Dayton "D-R" V-Belt Axle Drive

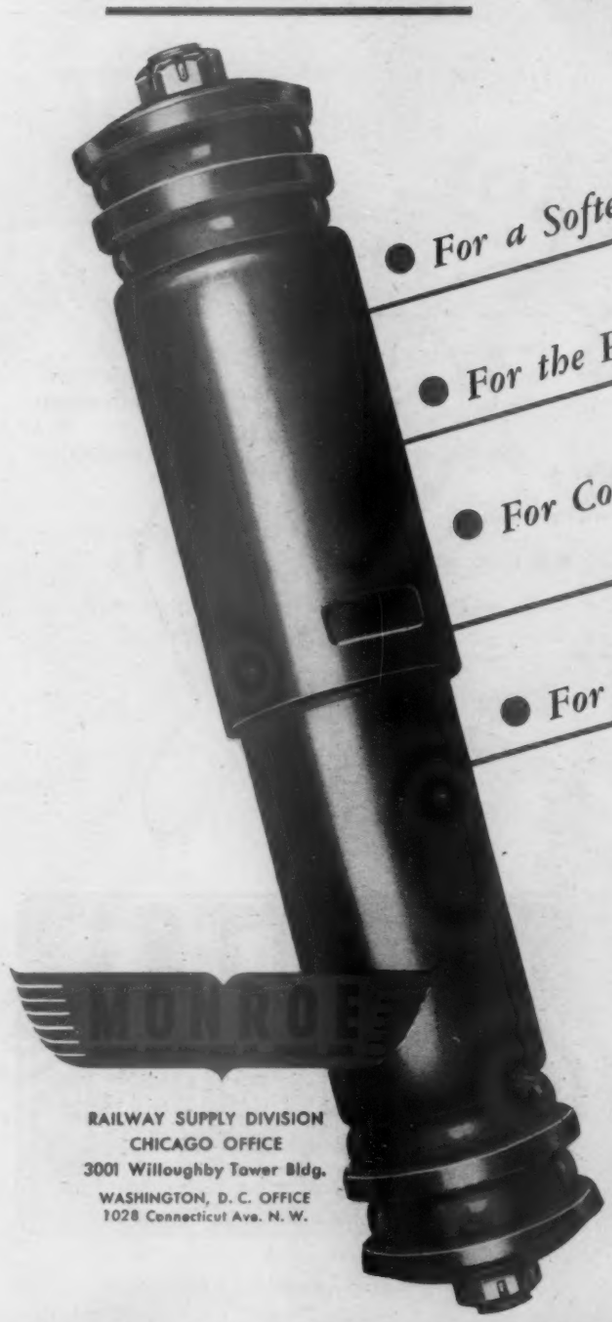
1. Quiet and smooth performance with high availability—in 15 years a mechanical failure due to V-Belts has never been reported.
2. Provides a flexible, cushioned connection between the car axle and the driven unit that protects generators and other equipment should a mechanical failure occur.
3. It is convenient and economical to install . . . no complicated or expensive truck changes are necessary . . . no special axles are necessary.
4. Duplicate equipment is not necessary to take care of emergencies—when wheel changes must be made, only the axle pulleys need to be removed.
5. It greatly reduces maintenance cost on mechanical equipment as well as on the drives.
6. It imposes a minimum weight on the car axle.
7. Easy and simple to install, dependable in operation, and insures uninterrupted performance.

Railroad V-Belts by **Dayton Rubber**

THE MARK OF TECHNICAL EXCELLENCE IN NATURAL AND SYNTHETIC RUBBER

MONROE

HYDRAULIC SHOCK ABSORBERS



- *For a Softer, Safer Ride at Higher Speeds*
- *For the Protection of Lading in Freight Cars*
- *For Constant Uniform Control of All Types of Car Suspension Systems*
- *For Durability Which Means Economy*

Designed for application to your equipment without disturbing existing spring capacities, Monroe's Direct-Double-Action *Hydraulic* Shock Absorbers have proved over millions of railway car miles to really take the punishment out of riding.

Monroe consulting engineers, with their 30-year background of experience, are immediately available to work with you in designing new, lighter weight cars and in rehabilitating rolling stock. Write or wire.

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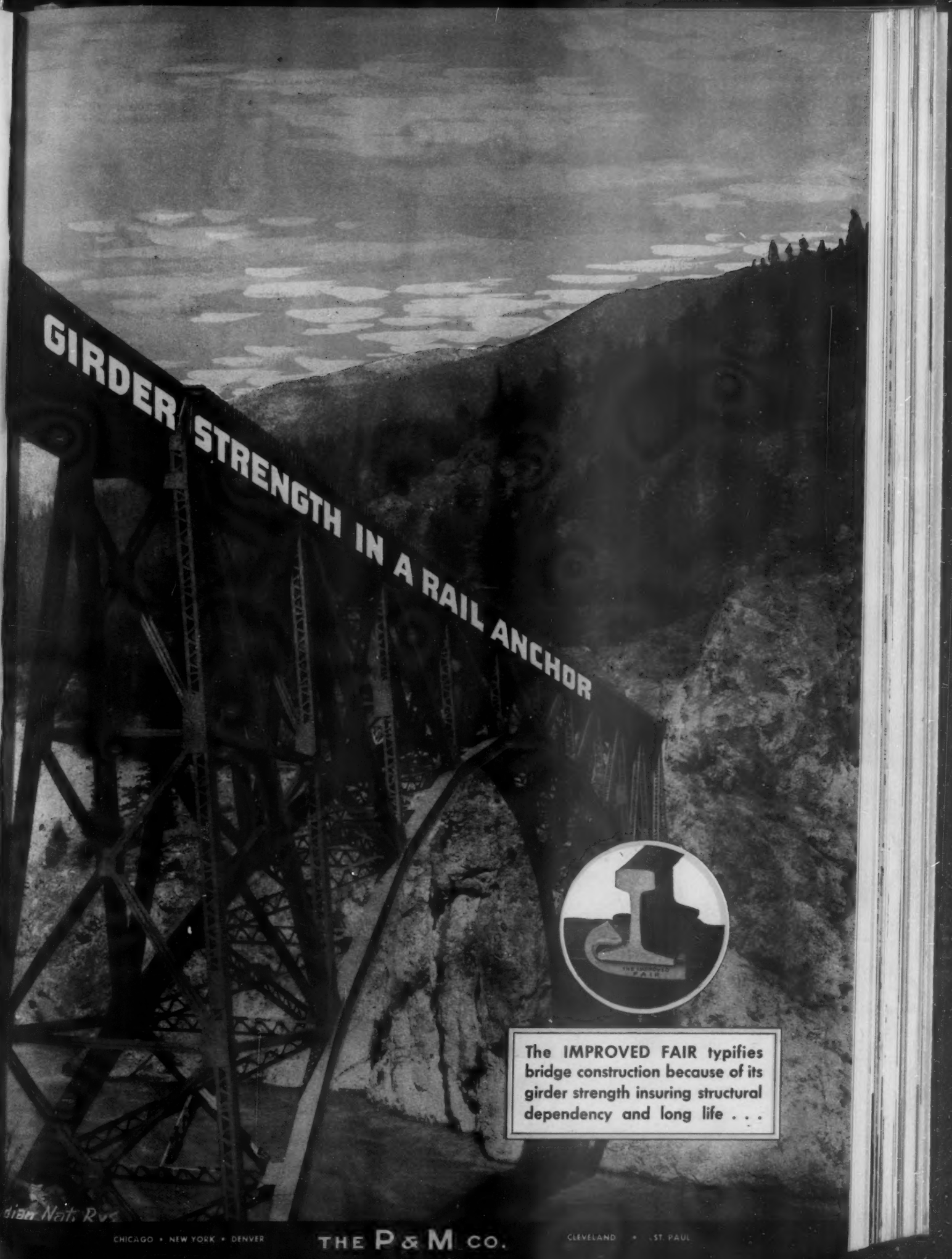

GIRDER STRENGTH IN A RAIL ANCHOR
The IMPROVED FAIR typifies bridge construction because of its girder strength insuring structural dependency and long life . . .
CHICAGO • NEW YORK • DENVER
THE P & M CO.
CLEVELAND • ST. PAUL

Red Lead halts Rust-Producing ELECTRO-CHEMICAL ACTION

No other protective paint for metal has ever known such wide acceptance by industry, through the years, as Red Lead. And recent scientific research has disclosed that Red Lead's outstanding performance results from basic characteristics of the pigment itself.

Not the least important of these is the ability of Red Lead to halt electro-chemical action — the fundamental cause of rusting.

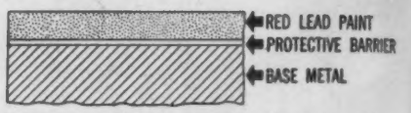
In this action weak currents are generated, due to physical and chemical differences in the metal and to other factors. These lead to corrosion of the iron.

These factors are always present, but their effects are eliminated by Red Lead.

Here's what happens: Red Lead, because of its singular composition, possesses properties which enable it to form a compact, tightly adherent, protective film, located at the interface of the metal and the paint coating. See cross section diagram above.

This film—so thin that it is not apparent to the human eye—is in very intimate contact with the metal, and its formation halts electro-chemical action — and the corrosion of the metal.

Once formed, it is essential that the continuity of the film be maintained — if the shield is to be effective. When Red Lead pigmented paint is used, any small breaks in the protective shield, due to abrasive action or otherwise, are readily healed. The metal remains in a rust-inhibited condition as long as Red Lead coats the surface.



The invisible safeguard against corrosion
This diagram shows the interfacial film, located at the metal and paint-film interface. The formation and the maintenance of this shield by Red Lead halts electro-chemical action . . . safeguards the metal against rust.

Specify RED LEAD for All Metal Protective Paints

The value of Red Lead as a rust preventive is most fully realized in a paint where it is the only pigment used. However, its rust-resistant properties are so pronounced that it also improves any multiple pigment paint. No matter what price you pay, you'll get a better paint for surface protection of metal, if it contains Red Lead.

Write for New Booklet *"Red Lead in Corrosion Resisting Paints"* is an up-to-date, authoritative guide for those responsible for specifying and formulating paint for structural iron and steel. It describes in detail the scientific reasons why Red Lead gives superior protection. It also includes typical specification formulas. If you haven't received your copy, address nearest branch listed below.

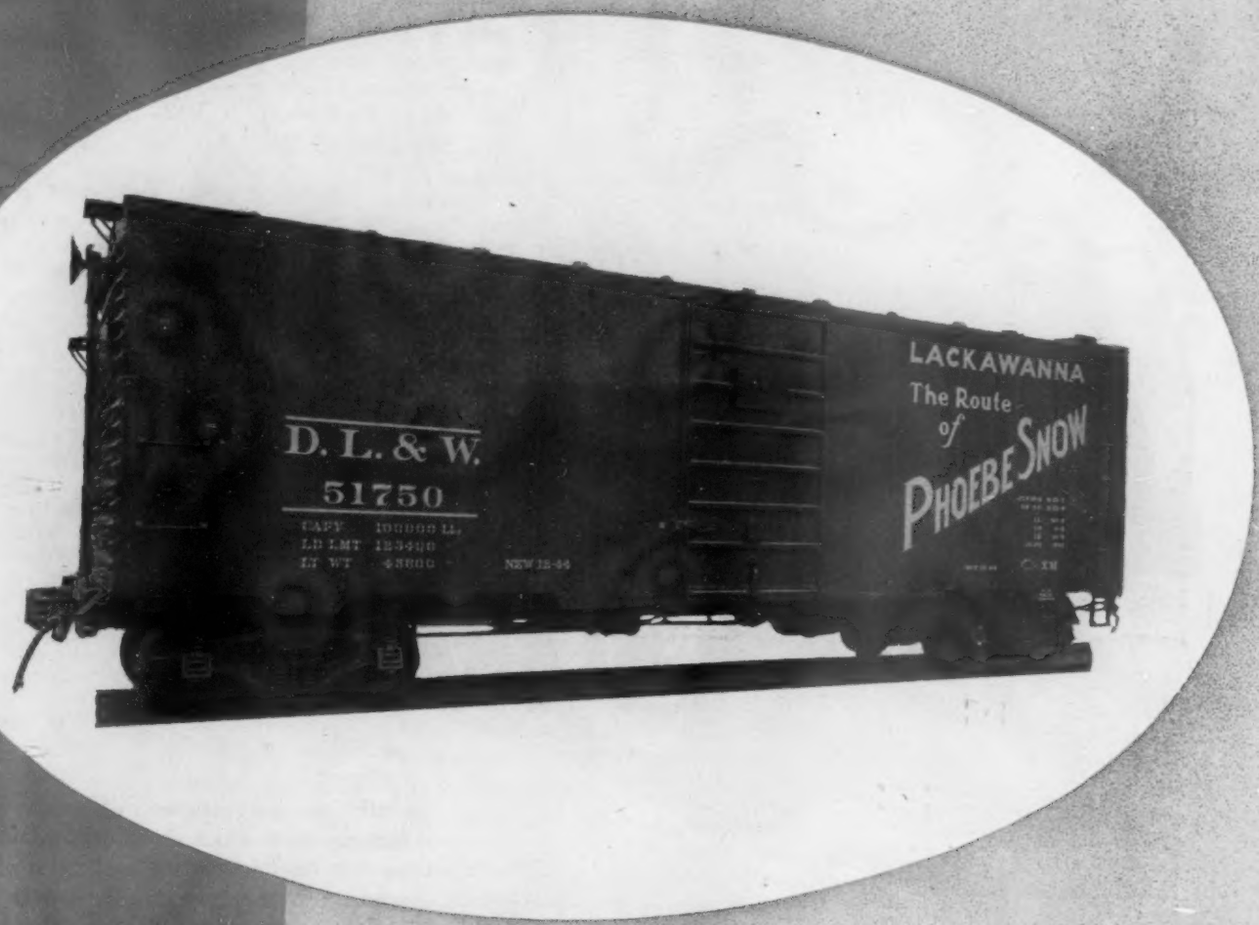
* * *

The benefit of our extensive experience with metal protective paints for both underwater and atmospheric use is available through our technical staff.

NATIONAL LEAD COMPANY: New York 6; Buffalo 3; Chicago 80; Cincinnati 3; Cleveland 13; St. Louis 1; San Francisco 10; Boston 6, (National Lead Co. of Mass.); Philadelphia 7, (John T. Lewis & Bros. Co.); Pittsburgh 30, (National Lead Co. of Pa.); Charleston 25, W. Va. (Evans Lead Division).

Dutch Boy
Reg. U. S. Pat. Off.
Red Lead

MAGOR



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MAGOR CAR CORPORATION

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IMPROVED LOCOMOTIVE ECONOMICS WITH

LFM

LIGHT WEIGHT
ALLOY STEEL PISTONS
AND COMBINATION
UNIVERSAL SECTIONAL
BULL AND PACKING RINGS

Locomotive operating efficiency depends upon several factors, one of which is improved cylinder operation that results from the application of LFM Light Weight Alloy Steel Pistons and Universal Sectional Bull and Packing Rings. Much lighter than the conventional type, LFM Light Weight Pistons have definite operating advantages, such as—

- elimination of steam leaks, saving power and fuel
- reduction of wear to other component parts
- increased mileage between renewals
- considerably reduced maintenance costs

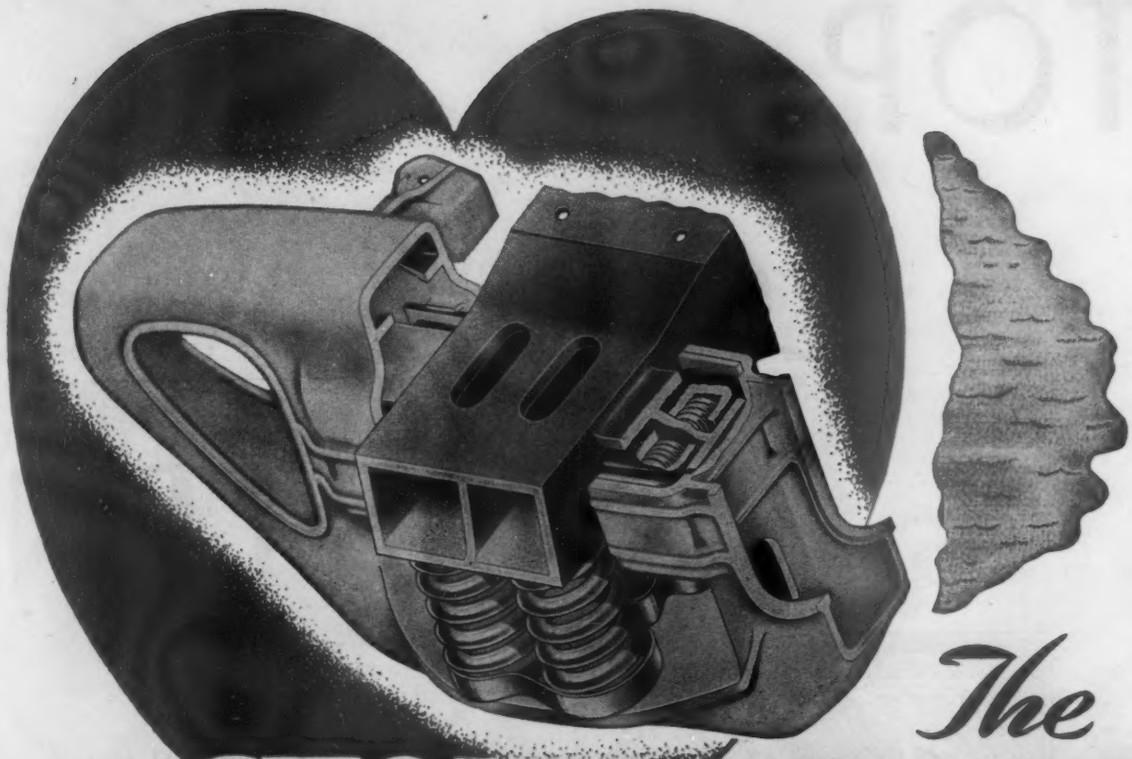
LFM's engineering and shop facilities are available at all times to your mechanical department for consultation on efficient locomotive operation.

Pioneers in the Development of the Light Weight Piston and Combination Sectional Packing

Established 1872

THE LOCOMOTIVE FINISHED MATERIAL CO.

ATCHISON, KANSAS ★ NEW YORK CITY ★ CHICAGO, ILL.



The STOUT HEART

of the New SCULLIN L-V TRUCK

LATERAL-VERTICAL CUSHIONED MOTION

—one simple device cushions and controls both lateral and vertical motion

Simple, trouble-free design based on time-tested railroad principles—no costly, hard-to-maintain attachments.

• This unique arrangement of built-in lateral springs functions between side frame and bolster. It provides controlled, resilient cushioning of lateral motion and actuates snubbing elements which cushion and control vertical motion.

• The resilient contact between side frame and bolster maintains constant controlled alignment—eliminates lateral impacts—reduces lateral journal stresses.

• Designed to make higher speeds really *safe* for lading, cars and roadbed.

For complete details and engineering data write:

ARMY NAVY

SCULLIN STEEL CO

SAINT LOUIS 10, MISSOURI

STEEL CASTING MANUFACTURERS SINCE 1899

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STOP
LOOK
LISTEN

On some twenty-three railroads in the United States our steel toe safety shoes can be purchased in the railroads' company stores on a pay roll deduction plan. If the railroad where you are employed is one of those having our service, you will find the right shoe for your job made of the right materials to give WEAR and also a correct fit to give COMFORT. Ask your nearest Railroad Stores Department for information.

Shoes for TRACKMEN — WAREHOUSEMEN — SHOPMEN — TRAINMEN — FOREMEN

HEAVY OUTSIDE WORK

Black, Heavy, Work-Shoe Leather Blucher. Double leather outsole, rubber heel. Also available with composition outsole. Sizes 5 to 11 and 12. Widths D, EE.

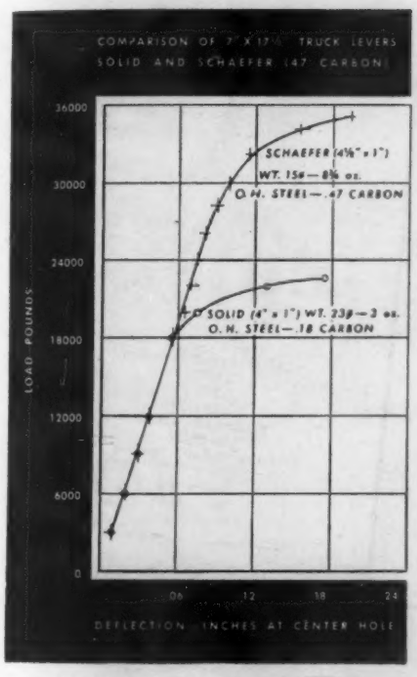
UNION MADE

Safety First SHOE COMPANY

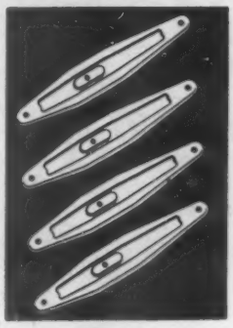
HOLLISTON, MASSACHUSETTS

Makers of Industrial Shoes for a Half Century

Needless weight above car wheels is extravagance that no railroad can afford...



So, Schaefer takes the metal that would make three levers of the solid type and forges from it four scientifically designed Schaefer levers. Each is lighter in weight by one third, yet stronger than the solid lever. The chart shows the smaller deflection of the Schaefer lever under load. Because the design is correct, resistance to stress is uniform throughout the entire length. Every manufacturing operation is accurately controlled, holes are correctly spaced and reamed to exact size. Specify Schaefer.



less Weight

Full Strength

Schaefer

SCHAEFER EQUIPMENT COMPANY • • • KOPPERS BLDG. PITTSBURGH, PA.

Railway Age

With which are incorporated the Railway Review, the Railway Gazette, and the Railway Age-Gazette. Name registered in U. S. Patent Office.

Vol. 121 October 12, 1946 No. 15

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In This Issue

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Get better use of your NEW rolling stock.

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CERTAINLY, new locomotives and cars will strengthen your railroad's position in relation to competitive forms of transportation. But, how can you extract the maximum utilization from this equipment, with greater economies and unsurpassed safety? Here's the answer—"Union" Centralized Traffic Control!

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The Week at a Glance

IN SPITE OF STORM: An article on page 600 describes in some detail the "hook-up" by which the Pennsylvania, as an experiment, used a thousand mile detour over commercial telegraph circuits and beamed radio to transmit the electric impulses operating switches and signals in C. T. C. territory. Here is proof that in time of crippling storm or devastating floods which interrupt regular line wire circuits there need be no equivalent breakdown of C.T.C. operation, since some alternate electrical route around the gap, however unorthodox it may be, can readily be substituted for the regular carrier channels.

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THE WAY TO SOCIALIZE: The technique for bringing about socialization of industry is relatively simple—just paralyzing that industry through strikes. So a speaker at the recent annual Associated Traffic Clubs meeting, reported herein, told that gathering, and as an example he pointed to the nation's coal mines, now in government control as a result of a strike encouraged by government policies. If the people who depend on private enterprise for their jobs and the sort of opportunities Americans always have enjoyed aren't going to do anything to bring to a halt—and reverse—this trend toward state control of industry, who is? That, in effect, was the question put to the assembled traffic men.

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CROSSING PROTECTION: In an illustrated article in this issue the point is made that very much more can be accomplished to save life and to reduce property damage resulting from railway-highway grade crossing accidents through the installation of adequate warning lights and gates and the closing of little-used crossings than through elaborate and costly grade separation projects. Naturally some of the more vociferous highway "users" would prefer to see crossings at grade eliminated —at the expense, of course, of the taxpayers and the railroads—so their vehicles could avoid a few stops, and the engineers doubtless find in such elaborate structures greater opportunity to demonstrate their skill, but simple, standardized and relatively inexpensive protective devices have their definite practical advantages for all except the very busiest intersections.

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"CARRY BACK" MAKES NET: Because the railroads made some money last year, generally speaking, and had to pay proportionate taxes to the federal treasury, they are able this year (though they will not be in 1947) to "carry back" to income parts of such taxes. This device, put into the law primarily for industries whose war output, and profit, were far above normal, and not particularly for the benefit of the railroads, enables the Class I roads as a whole to report a net income for the first eight months of this year of about $55.4 million. Last year, as reported in the news pages, net was for the comparable period almost $444 million. And this year, without taking these exceptional tax credits into consideration, these same railroads ended the eight months $4.9 million in the red, though they had, except for strikes, just about all the business they could handle. Yet people in high government offices have been advising the Interstate Commerce Commission to wait for "proof" the railroads need more revenues!

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LOSS ADMITTED: Having run short of bookkeeping loopholes, and of interest collected, the government barge lines admit a deficit of $845 thousand on last year's operations. As the news pages report, there is still much ado made over the "savings" which are said to accrue to the "public" from the outfit's transportation business, and the idea that it would have to pay taxes and meet other charges if run like the private businesses it competes with is soft-pedaled according to precedent.

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POWER ABUSED: By taking advantage of their political strength (and of the apathy and lack of understanding of that three-fourths of the working population which does not belong to a labor union) the unions have secured a legal power of monopoly which their leaders purposely use—and abuse—to conspire and to act in ways to inflict on the whole public inconvenience and losses and even actual suffering. Employers have no such power, and the public would not permit them so to use it if they did have it, and did choose to abuse it in such short-sighted fashion. It is short-sighted because (this issue's leading editorial observes) the inescapable consequences are depression and unemployment, the effects of which hit union members hard, even if their leaders are relatively immune.

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PRACTICAL POLITICS: There is a way by which such abuse of power by union leaders can be curbed, but so-called regulation of unions—much discussed but seldom voted on—will not accomplish that result unless it involves a definite and complete removal of those leaders' exemption from the operation of the laws that otherwise apply to conspiracy, restraint of trade, coercion, blackmail and acts of violence. Congress can remove the unions' monopolistic powers by subjecting their leaders to the same legal restraints it applies to other citizens. But Congress is not likely to take such action until the demand for it becomes at least as impressive politically as the union leaders' demand for unrestrained privileges.

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NEW COMMODITY DATA: Changes in the system for reporting freight movement by commodities have been worked out by the railroads and Interstate Commerce Commission, to be effective next January 1. The most conspicuous difference between the new and old forms is in the establishment of a relatively large number of separate classes to cover commodities formerly listed as manufactures and miscellaneous. Details appear in the news pages.

POST-WAR BRAKE DEVICES: Westinghouse Air Brake's Vice-President Stewart told the fuel and traveling engineers, at their recent annual meeting, what is going on these days in the modernization and perfection of the air-brake mechanism as applied to locomotives and freight and passenger cars, and of auxiliary pneumatic devices used in train operation. An article adapted from his paper appears on page 604. Among other advances made in this field, particularly timely with present trends toward higher speeds, are faster response to brake applications, more flexible control, the practical use of higher braking forces, and quicker reaction to sliding wheels. The means by which these improvements have been brought about are discussed in some detail.

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NEW BRAKE VALVE: Mr. Stewart goes on to describe a new engineman's brake valve which is, as he puts it, built like a sectional bookcase. There are five basic sections to the pedestal, two of which are uniform in all designs while there are several types available for the other three, so that the design appropriate to the service the locomotive is to be used in can readily be installed.

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SHORT LINES MEET: Like the Class I roads, the short lines are plagued by higher costs, scarcities of materials, and inequitable legislation, the Crosser law particularly, according to our report in this issue of the recent annual meeting in Chicago of the Short Line Association. A detailed legislative program was presented, and recommendations were made toward working out a settlement of the per diem rate dispute. A Post Office Department representative suggested that short lines consider more seriously the possibility of substituting highway vehicle postal service for railroad mail cars, particularly where line abandonments are contemplated.

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BREATHING SPELL: The Department of Justice has agreed to refrain for the present from filing more anti-trust suits against the railroads on the ground that joint action by them in making rates is conspiracy in violation of the anti-trust laws. But it only has agreed to wait and see what happens in the Georgia case, now before the Supreme Court, and perhaps in the Lincoln, Neb., case. The news columns report the terms of the "armistice" as set forth by the A. A. R.'s general counsel.

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CULLED FROM THE NEWS: The C. & O.'s 1945 annual report won that road first prize in competition with all industry. . . . The Civilian Production Administration says priorities will give freight car builders enough steel to produce 7,000 cars monthly in the last quarter. . . . September deliveries by freight car builders and company shops to domestic roads totaled 4,016, a decline from August. . . . About 40 railroads are getting Navy awards for war service. . . . The government now gets a 10 per cent discount on Army and Navy travel.

3,594,222 Freight Miles over mountains and desert

—AVAILABILITY 89.6%

THE Western Pacific, with main line from Oakland, California to Salt Lake City, Utah, is a good solid test of a freight locomotive's stamina and dependability.

The terrain ranges from rugged mountainous hauls in the Sierra Nevadas, including Feather River Canyon, to considerable stretches of desert run. Since the line is a vital link for hauling much perishable freight, fast schedules must be kept.

Here's what 12 General Motors Freight Diesels show on the Western Pacific. Together these locomotives — while amassing 3,594,222 miles — have an average availability of 89.6%. The average mileage per locomotive per month is 7,361 miles.

Such *actual* records, in all kinds of service, distinguish General Motors Diesels. Such *actual* records point up the extra value inherent in these locomotives, designed and built by specialists in Diesel locomotives.

GENERAL MOTORS LOCOMOTIVES

ELECTRO-MOTIVE DIVISION

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RAILWAY AGE

The Labor Unions' Power of Monopoly

The labor problem is the most serious with which the nation is confronted. It will not be solved until the people learn what the real cause of the problem is, and have Congress remove it. That real cause is the *power of monopoly* which Congress itself has given the labor unions, and especially their leaders, by which they have been made a class that is legally privileged to do what no other class in this country ever was legally privileged to do.

About 58 million members of the population are now gainfully employed. Only about 14 million, or less than one-fourth of them, belong to labor unions. The power of monopoly has been given this one-fourth by certain laws, especially the Norris-LaGuardia Act and the National Labor Relations Act. That is, they have been given by these laws the power to agree, by striking, to shut down entire industries, whether local or national. And numerous unions have within the last year fully exercised this power, not only to secure advances in wages, but also to secure "featherbed" working rules that reduce the work they do for the higher wages they get.

How Unions Use Their Power

The possession and use by *employers* of this power to agree, conspire and act to shut down entire industries would violate the anti-trust law and subject them to the penalties of that law. And this great power of monopoly, which employers never did have, but which labor leaders now have, is not being used by labor leaders merely to coerce employers. It is being used by them to inflict inconvenience, losses and suffering upon the public with the purpose and expectation of thereby creating a demand from the public for settlements on terms more advantageous to the unions than employers would grant without this pressure from the public.

What this means, stated in plain English, is that many unions are using their monopoly power to levy legalized blackmail not only on employers but on the 44 million of gainfully employed persons who do not belong to unions. And seldom are all the methods used by the unions legal. The intimidation and violence to which they often resort to enforce so-called "peaceful picketing" are crimes which would cause them or anybody else to be arrested and jailed if committed for any other purpose.

A lot of legislation has been proposed for "regulating" and "controlling" labor unions. No legislation which left them in possession of their present power of monopoly would solve the problem presented by their possession of this power. And yet no politician has had the intelligence and courage to propose legislation attacking the real cause of the present labor problem—viz., the possession, use and abuse by unions, especially their leaders, of the *power of monopoly*.

If all the leaders of any entire *industry*, local or national, should join in a conspiracy completely to shut it down for any reason or purpose whatever, they would be stopped immediately by an injunction from some court. Leaders in *business* cannot lawfully thus disregard the welfare and rights of the public. The effects on the public of such abuse of the power of monopoly by leaders of labor unions are exactly the same as would be the effects on the public of similar abuse of the power of monopoly by leaders of business. The assumption on which all our governments, local, state and national, are founded is that all our laws exist solely for the protection and benefit of the public—i. e., the people as a whole. Why, then, do we have laws that forbid business leaders, but authorize labor leaders, to subject the public to such inconvenience, losses and suffering? And why do our public officials not arrest and punish strikers for violations of laws which prohibit resort to intimidation and violence by anybody and for any purpose excepting self-defense? The answer, of course, is "politics"—a kind of "politics" which encourages gangsterism of all kinds and leads toward anarchy.

Unequal Bargaining Strength

Both the Railway Labor Act and the National Labor Relations Act provide for collective bargaining as the sovereign means of settling labor disputes. But collective bargaining has ceased to work in most industries. Why? Because the passage of some laws and the non-enforcement of others have given labor unions in most industries much more power than employers. The

unions will continue to use their power of monopoly and intimidation as long as they possess it; and, as long as they are allowed to have and use the power of monopoly, collective bargaining won't work. But the unions cannot repeal the most important of all economic laws—that of supply and demand; and continued possession and abuse by them of the power of monopoly must inevitably result in depression and unemployment.

The sooner Congress deprives labor unions of the privilege it denies to everybody else of possessing, exercising and abusing the power of monopoly, the better it will be for everybody, including members of the unions.

Mechanical Equipment's Role in Freight-Handling

The major cause of the present acute car shortage is the scarcity of materials for repairing old cars and building new ones. However, the shortened work week in industry, adding to the time cars are held for loading and unloading, is also a factor of importance. Because of government "controls," there is little hope that the first cause will soon be eliminated, but there are numerous indications that the use of mechanized equipment in loading and unloading cars can definitely overcome some of the effects of the shorter work week, thereby increasing the ratio of the time when cars are in actual movement.

The expansion of mechanized material-handling methods to include freight handling was curtailed during the war years by restrictions on the purchase of the necessary equipment. However, this equipment is becoming available again, and many railroads are contemplating a reorganization of their freight-handling facilities along lines similar to those used by the stores department in handling company supplies.

Numerous industries have established material-handling departments for inter-plant movements, and analysis of the problem and application of mechanized methods have in such cases reduced costs from 15 to as much as 65 per cent. These industries would welcome cooperation from the railroads in working out joint material-handling problems. The experience gained by the carriers and other industries in their long operation of such equipment, as well as that of manufacturers' representatives, should prove mutually helpful in such an undertaking as this. Another incentive for adoption of mechanized freight-handling by the railroads arises from the ever-increasing wage rates.

The direction of an undertaking as large, as important, and with as many technical problems as this cannot safely be assigned to a layman; it requires someone who, in addition to being thoroughly familiar with all phases of the job itself, also has an understanding of the various available mechanical devices and their possibilities. He should be capable of conducting analytical surveys to determine the most effective methods and the most suitable equipment for each situation. Furthermore, such an officer should have sufficient authority to be immune to the effects of inter-departmental antagonisms; and his authority to see that his instructions are obeyed should be commensurate with his responsibilities.

A department so organized would not only assure the ultimate economy in the handling of freight in railroad hands, but should also be available for consultation by shippers and receivers to help them solve the freight-handling problems at their own loading platforms. Such cooperation from the railroad would not only build good will, but would promote the quicker release of cars.

It is true that there are some problems encountered by the railroads in handling and transferring freight shipments which are not found in industry; still there are basic principles that are applicable to the job whether done by railroads or shippers. It is improbable that all roads will adopt the same methods or that any one road could use similar systems or equipment at all freight-handling points, but studies at each location will reveal the best method applicable to its particular situation.

The manufacturers of material-handling equipment have competent men in their employ who have studied material-handling problems from all angles, and whose experience is available to users of this equipment, to enable them to get the maximum return from their investment in it. The armed services used the advice of these men to good advantage during the war, and their knowledge should be of equal value to those who are trying to improve peace-time economy in the movement of freight and materials.

A Cost Factor in Locomotive Utilization

There are two schools of thought regarding the effect of intensive utilization on locomotive maintenance costs. Some say that the improved condition in which locomotives must be maintained results in higher over-all repair costs. Others are of the opinion that keeping power in better shape is cheaper in the long run.

The full answer to this debate on whether or not higher utilization leads to savings in maintenance costs is too involved to attempt to cover here, and at best can be settled only by detailed cost studies. But it is worth while pointing out that there is one often-overlooked or under-emphasized saving that can be realized through intensive utilization of the fewest possible number of active locomotives. That is the effect of periodic inspections on the repair cost per mile.

Periodic inspections are performed on the basis of time, not mileage. Therefore, the greater the mileage that can be performed by a locomotive between these inspections, the less they will cost per locomotive-mile simply because there are more miles over which to divide the expense of such an inspection.

To take one example; a monthly boiler wash and inspection must be given to each active locomotive whether it has accumulated many or few miles. While

the cost of repairs made at the time of the boiler wash may vary somewhat with the mileage that the locomotive has run, much of the cost is constant. The expenditures for dumping and rebuilding fires, assembling and disassembling the wash fittings, and for performing the inspection proper will not be affected appreciably, if at all, by the mileage that the engine has covered. Here, then, is a factor in maintenance costs on which an appreciable saving can be made. It is a factor that tips the scales in favor of the advocates of the theory that higher utilization gives lower over-all maintenance costs.

Seeds of Progress

The American Railway Engineering Association, to achieve maximum effectiveness in its work, needs and is requesting the participation of all of its members in developing new and profitable subjects for investigation by the committees of the association. The work of this association is primarily carried on by, or under the auspices of, standing technical committees which are assigned subjects for investigation. The value of the work done by these committees is dependent largely on their being given subjects for study which represent the most pressing problems in their field of activity. Ideas for new subjects for such study are the seeds from which progress springs in railway construction and maintenance.

The development of new subjects for study in the A. R. E. A. is not a process which is performed automatically by some higher authority endowed with special faculties for originating those subjects that are the most timely and pertinent. It is true that the board of direction has its committee on outline of work, but the principal function of this committee, rather than to initiate subjects for study, is to make assignments to the technical committees based on suggestions received from various sources. The principal sources have been the committees themselves, many of which have sub-committees on outline of work to handle the matter for them. This arrangement has produced good results, but the opinion prevails in some quarters that it could easily lead to an attitude of self-sufficiency on the part of the committees, resulting possibly in reluctance to accept suggestions from other sources.

Actually, maximum effectiveness in developing ideas for study can be attained only if *all* members of the association are enlisted in the endeavor; and President J. B. Akers of the A. R. E. A. is extending a cordial invitation to all members to submit subjects which in their opinion merit study by any of the association's committees, these suggestions to be sent to the secretary's office, whence they will be referred to the committe on outline of work of the board of direction. As a matter of fact, A. R. E. A. members have always been at liberty to submit suggestions through these channels, but few have availed themselves of the opportunity, either because of lack of knowledge that it existed or because of inertia.

The situation has now been clarified by Mr. Akers. The individual member is recognized as a wellspring of ideas for new lines of investigation. By recognizing and acting upon this responsibility he will be helping in an effective way to assure maximum progress in his field.

Index to Volume 120

The indexes to the latest volume of the *Railway Age,* January to June, 1946, are now ready for distribution, and copies may be had by those subscribers desiring them. Requests should be addressed to the Circulation Department, *Railway Age,* 30 Church street, New York 7, N. Y. Subscribers who have in previous years made application for the index need not apply again; they will continue to receive it as long as they continue to subscribe.

A Railroad Problem—Finding Capital to Meet Competition

For many years we have been carrying people long distances on their vacations, and the vacations began when the train trip ended. They began as soon as the people got the cinders out of their eyes or had plunged themselves into a bath, and we hoped they would feel refreshed and not cuss out the railroad too much. The railroad was long the only way there was to get there.

In the future, we are going to make your vacation begin as soon as you get on the train, and we will do it by furnishing unparalleled service, good food, restful accommodations, good air and new kinds of amusement and entertainment features en route. All that is part of our program for maintaining our place in the passenger field and building up our patronage.

The proof of the pudding is in the eating. It was our experience that, when the air lines started, they undoubtedly did take away some Pennsylvania Railroad passenger business, but our records show that, as their business proceeded to grow, our business also increased in similar percentage. . . .

At the time when scheduled passenger air transportation was making its beginning—when the Pennsylvania had a moderate financial interest in aviation—we built our own emergency airfields, we lighted our own air lanes, so that planes could come in and land in the dark. That is no longer the case; everything is provided with public money. . . .

Just where are we going? Our railroads will have to spend as much money after World War II as they did after World War I.

Railroads won't be able to borrow as we did after the first World War. Of course, we will be able to borrow for equipment. We will always be able to do that, but the railroads of the United States—not merely my railroad, but all other railroads—are not going to be in a position to raise new capital, for general purposes, by large scale long-term borrowing.

There are only two places where we will be able to get funds for rehabilitation. One place is out of the depreciation account, which is a proper place from which to obtain such funds. The other is out of earnings. . . . Without adequate earnings, we will have to contract and cut down. With adequate earnings we shall be able to build up.

—From an address by Martin W. Clement, president of the Pennsylvania, at a luncheon given by the Public Affairs Committee of the Union League of Philadelphia.

Short Lines Look at Post-War Year

Terminal and Class II and III road chieftains find low rates, high costs and empty material bins No. One problem of the first post-war year; hear talks on pensions, mediation and mail

APPROXIMATELY 150 officers of roads which—as the old saw goes—"may be shorter than the trunk lines but are certainly just as wide" attended the thirty-third annual meeting of the American Short Line Railroad Association in Chicago's Morrison Hotel on October 2 and 3, to vote a bold and forthright legislative program for the coming year; to discuss the besetting problems of low rates, declining traffic, high wages and prices, and shortage of materials and freight cars; to hear addresses on the Railroad Retirement Board, the National Mediation Board and highway mobile post offices; and to approve committee reports. Since the meeting was the first national forum of the Association since the twenty-ninth annual meeting held in Atlanta, Ga., in October, 1942, the reports and discussions were packed with the experiences and problems of several years of intense railroad activity.

President J. M. Hood, in his report on the first post-war year of the short line carriers, described the train of difficulties which have followed the close of the war. Said he: "A car shortage, steadily growing worse, has been in evidence and has contributed to the problem of rendering a proper service and earning adequate revenues. Increasing costs for material, particularly fuel, have been accompanied by some shortages of necessary items, particularly repair parts."

Congress Raises Costs

Mr. Hood expressed the opinion that "the membership has not been well treated at the hands of public authorities." He complained that Congress enacted many statutes which resulted in increased cost and difficulty of operation. Second, the regulatory bodies have continued to press for costly appliances and equipment in the interest of additional safety for passengers and employees, but, at the same time, have been reluctant to authorize adequate increases in fares and rates. As a result of these and other difficulties, "the cash and current position of the members are being depleted rapidly and alarmingly."

Member roads of the Association reported to the Interstate Commerce Commission for the calendar year 1945 as follows:

Miles of Road Operated	15,775
Employees	51,491
Compensation	$132,894,237
Average Annual Compensation	$2,581
Investment, December 31, 1945	$978,345,028
Railway Operating Revenues	$285,469,374
Railway Operating Expenses	$230,156,816
Railway Tax Accruals	$31,990,505
Net Railway Operating Income	$15,591,911
Interest Charges	$16,982,131
Net Deficit	$1,437,714
Dividends	$5,139,275

Mr. Hood pointed out that liquidation of the Railroad Credit Corporation has proceeded to the point where 99½ per cent of the contributions have been returned to the carriers. He expected that a further liquidation dividend of one-half of one per cent would be paid during the current year, after which the corporation would be dissolved.

Rates and Legislation

Seeing no hope for a freight rate increase before January 1, Charles A. Miller, vice-president and general counsel of the Association (and a member of the Law Committee of the Association of American Railroads), advised the membership to "sit still and hope for the best." He stated that many persons in railroad circles believe the rate increase will amount to about 15 per cent.

Mr. Miller presented the Association's legislative program for 1946, which was approved in full by the membership. Based on the two fundamental concepts of (1) private ownership and operation of the railroads and (2) equality of regulation and of opportunity for all competitive forms of transportation, the following federal legislation will constitute a major goal of the short lines:

(1) Private ownership and operation of the nation's railroads.

(2) Equality of regulation and equality of opportunity for service for all competitive forms of transportation.

(3) The discontinuance of subsidies to and the equalization of the tax burden upon all forms of interstate transportation.

(4) Relief from financial burdens incident to the elimination of highway-grade crossings.

(5) Fair and equitable treatment of short line railroads, whether or not under federal control, and regardless of federal control of Class I carriers.

(6) Regulation of common carriers subject to the Interstate Commerce Act with respect to procedures for the establishment of rates and fares, and the making of train schedules.

(7) Amendment of Sections 1 (22), 5 (13), and 21a (1) of the Interstate Commerce Act so as to make these and related paragraphs inapplicable to street, suburban and interurban electric railways except those which are operated as parts of general steam railroad systems of transportation or are engaged in the general transportation of freight and interchange standard steam railroad freight equipment with steam railroads for transportation in interstate or foreign commerce to or from points on their lines.

(8) Amendment of Sections 1 (22) and 5 (2) (a) of the Act so as to make them inapplicable to acquisition or operation of spur, industrial, team, switch, or sidetracks and of the excepted electric lines.

(9) Amendment of Section 3 (2) of the Act to include the extension of credit for unpaid transportation charges of express companies.

(10) Amendment of Section 5 (2) (b) of the Act to remove therefrom the requirements that a public hearing shall be held in all cases where railroads are involved.

(11) Amendment of Section 20 (6) of the Act so as to be applicable to records of persons who directly or indirectly, through rental agreements with shippers or otherwise, furnish cars to or for the use of any carrier by railroad or express company subject to Part I of the Act.

(12) Amendment of Sections 20, 220, 313 and 412 of the Act to authorize the commission to require reports from associations or organizations maintained by or in the interest of any group of carriers or freight forwarders subject to the Act, and to authorize the commission to inspect and copy accounts, books, records, etc., of such associations or organizations.

(13) Amendment of the Act to give the commission permanent emergency powers with respect to service by motor carriers and water carriers such as it now has with respect to service by rail carriers.

(14) Amendment of the Transportation of Explosives Act in the light of developments since its last revision.

(15) Amendment of the Standard Time Act to fully occupy the legislative field with respect to standards of time to be observed throughout the nation.

(16) Amendment of the Elkins Act to make clear its application to motor carriers and water carriers to the extent that it is now applicable to rail carriers and freight forwarders.

(17) Amendment of the Railway Labor Act of 1926, as amended by the Dill-Crosser Act of 1934, with respect to the National Railroad Board of Adjustment, to:

(a) Create a board of 36 members, consisting of 12 members selected by the railroads, 12 members selected by the employee organizations, and 12 public members appointed by the President removable only for inefficiency, neglect of duty, or malfeasance in office, with each division composed of 9 members, and Division 4 composed of 3 members.

(b) Require the board to conduct its proceeding so as to accord procedural due process.

(c) Give the board power to require attendance of witnesses and the production of books, papers, records, etc.

(d) Provide for the taking of depositions.

(e) Require awards to state findings of fact upon which based.

(f) Provide for judicial review of awards by any party in interest.

(g) Provide that awards shall not be retroactive for more than 60 days prior to date claim was presented to carrier against which made, unless different number of days is provided in agreement.

(h) Require actions to enforce awards to be brought within one year from their date.

(18) Amendment of the Railroad Retirement Act, the Railroad Unemployment Insurance Act, and the Carriers' Taxing Act, to make it clear that employees of contractors performing railroad work are not subject to these acts.

(19) Amendment of Section 8 (a) of the Rail-

road Unemployment Insurance Act of 1938, as amended, to reduce contributions on the part of the carriers to the unemployment insurance fund to 1 per cent instead of 3 per cent of the payroll.

(20) The abolition of the Inland Waterway Corporation as a governent agency and the discontinuance of barge line operations by the federal government.

(21) The imposition of tonnage taxes for commercial use of inland waterways.

(22) Legislation permitting the adjustment of the capital and debt structures of railroads upon the principles incorporated in the "Mahaffie bill," S.1253—79th Congress, as originally introduced.

(23) Amendment of Railway Labor Act to provide that the present jurisdiction of the National Railroad Adjustment Board be made mandatory and exclusive as to both parties; that the awards of that board be made final and binding upon all parties thereto, unless, within 90 days, any aggrieved party appeals to a special statutory three-judge court.

(24) Amendment of the Railway Labor Act to provide that as to all disputes subject to the jurisdiction of the National Railroad Adjustment Board, both strikes and lockouts be prohibited, with appropriate penalties.

(25) Amendment of the Railway Labor Act to prohibit all jurisdictional and sympathy strikes, with appropriate penalties.

(26) Amendment of the Railway Labor Act to give carriers and employee organizations the right to request the National Mediation Board to conduct a representation election at any time after one year from the date the collective-bargaining agency has been recognized by the carrier as such, or so certified by the National Mediation Board.

(27) Amendment of Paragraphs 3 and 4 of Section 15 of the Interstate Commerce Act to remove the restrictions imposed upon the Interstate Commerce Commission, other than a finding of public interest and avoidance of waste of transportation in the retention and establishment of rates and routes.

The Association also went on record as opposing a number of possible detrimental legislative acts, including "the appearance of an official of one government agency before another government agency, such as the Secretary of Agriculture appearing before the Interstate Commerce Commission, in rate cases."

Report of Legislative Committee

Submitting the report of the Legislative Committee, which is composed of 50 officers of member roads located in almost every state, Chairman J. W. Powell, president, Virginia Blue Ridge, appealed for cooperation of member roads in completing questionnaires regarding legislative needs and desires so that the committee might shape its work intelligently. Complaining that "for the most part members of the Association took little or no interest in aiding the officers in their [legislative] work" and that "in no instance did a substantial number of the members of the Association respond to the calls made upon them," Mr. Powell made clear his opinion that "so long as this situation exists, the Association can do very little in the way of legislative efforts to assist the membership."

The Accounting Committee reported that, inasmuch as questionnaire returns from member roads indicated lack of interest or impracticability, the question of blanket surety bonds to cover all employees of a railroad was discontinued from further consideration. The remainder of the report of this committee comprised a description of the experience of the Buffalo Creek in utilizing business machines for accounting. Commenting on the experience of this terminal carrier, the committee stated: "It is our opinion that where there is a sufficient volume of work, the accounting machine method has many advantages and offers substantial financial savings over the manual methods. Many of the short lines, however, do not have such volume, and it is only through their own surveys, with the assistance of someone thoroughly familiar with the different machines, that they can arrive at an intelligent conclusion."

Report on Car Service

The Car Service Committee of the Association, whose chief task currently is to progress the interest of the short lines in lower per diem rates, recommended that the short lines try first to come to an agreement with the Association of American Railroads. If no agreement can be reached, however, the A. S. L. R. R. A. should notify the Interstate Commerce Commission that it favors a formula for computing per diem rates based on the following considerations:

1. Cost be computed on a five-year average basis.
2. The active car-day basis be used for the calculation of per diem costs.
3. Investment be calculated on original cost, less depreciation.
4. Interest be calculated on a combination base, using a 4 per cent interest rate on the investment in excess of the equipment trust obligations.
5. Per diem rate be effective for the year 1945; stated in multiples of five cents.
6. Future changes in per diem rate be automatic, based upon a five cent minimum change in the rate for any year.

About the greatest benefit the federal government can confer upon the public is successful mediation and conciliation, according to Frank P. Douglass, chairman, National Mediation Board, in an address on October 2. Asserting that the business of the board is to attempt to be impartial and "to see a ray of light in every case brought before it," the speaker pointed to the railroads as the largest industry in the country. Their continued health under a system of private enterprise he regarded as a necessity for the country's economy as a whole and insisted that a way must be found to keep the rail carriers sound financially and to see that they "are on an even keel" with other forms of transportation.

Effects of Crosser Amendments

Payroll taxes for the year 1945, including payments by employees, were very nearly as great as the total net operating income of the combined membership of the A. S. L. R. R. A. for the same year, according to Frank C. Squire, member of the Railroad Retirement Board. The speaker emphasized that this comparison takes into account the heavy business of 1945 and is computed before the increased taxes under the new amendments go into effect in January.

The speaker then went on to outline in brief the major benefit provisions of the amendments. The monthly annuity and lump-sum death benefits run about 25 per cent higher than the benefits accruing to non-railroad employees under Social Security. Under the amendment liberalizing pensions for disability, an employee totally and permanently disabled may, under the new law effective January 1, 1947, obtain his annuity with only 10 years of service or, if he has less than this, he may still qualify at the age of 60. Cash sickness benefits become effective July 1, 1947, the rates therefore being the same as for unemployment. The board has estimated that approximately 1,100,000 claims will be filed by railroad employees in the first year of operation.

Mr. Squire then went on to set forth in considerable detail the increased work load on the Retirement Board resulting from the Crosser amendments. This, together with increases in rates of civil service pay enacted recently by Congress, will result in increasing administrative expenses of the board "by something like 60 per cent," according to the speaker.

More "Crosser Laws"?

In view of the heavy work-load of the board, Mr. Squire requested the short line officers to urge their employees not to write "for the time being" concerning their rights under the new provisions. To do so would slow up the examination of cases by the board to determine those entitled to annuities or increases in annuities. He pointed out that the board will shortly issue detailed literature regarding the new provisions for wide distribution among railroad employees. This will be written in easy-to-read, question-and-answer form. Furthermore, with the exception of employment relation provisions, the amendments to the Retirement Act do not become effective until January 1.

A more general exposition not only of the Railroad Retirement Act but of social insurance as a whole was presented to the Association at its luncheon on October 3 by W. J. Kennedy, recently-appointed chairman of the Railroad Retirement Board. Characterizing the railroad retirement law, as amended, as "the most comprehensive social insurance in the country," Mr. Kennedy gave it as his opinion that further social legislation of this character is in the offing.

He stated also that there is good reason to believe that the railroads save money when they pay taxes for railroad

retirement because they save the expense of their own pension systems; no longer have to pay superannuated employees—or "hidden pensioners"—more than they are worth just to keep them on the payroll; and are less harassed by labor turnover than other industries in spite of higher wage rates prevailing in the latter.

Mr. Kennedy defended the existence of a separate and more liberal pension and unemployment system for railroad workers on the grounds that the railroads are separately regulated in other respects, that the average age of railroad workers is higher and that earlier retirement is necessary to promote safe and efficient operation.

Post Offices on Rubber

The development of highway mobile post offices to replace mail cars on abandoned railway lines was discussed by John D. Hardy, deputy second assistant postmaster general, in charge of surface postal transport. Asserting that recent large-scale abandonments by the railroads resulted in elimination of adequate postal service for many towns for which R. F. D. service is not sufficient, he found mail service deterioration a major objection to short line abandonments.

Mr. Hardy pointed out that highway postal units were approved by Congress in 1940, but the law contains a number of provisions which have the effect of restricting the new operations severely. The Post Office Department made studies to determine which type of vehicle could best serve as a mobile post office to replace railway post office cars.

Tests with 33-ft. buses and longer tractor-trailers resulted in the finding that the bus-type vehicle is best suited for the purpose of handling and sorting mail en route.

Mr. Hardy told the short line officers it would be a good idea for them and their Class I brothers to operate such highway postal service themselves, both for the revenue accruing therefrom and to make it possible to discontinue unprofitable train service.

He pointed to the experience of the Gulf, Mobile & Ohio in initiating such service by truck.

Election of Officers

The following officers of the Association were re-elected by the membership. J. M. Hood, president; C. A. Miller, vice-president and general counsel; J. P. Nye, secretary-treasurer.

The board of directors also was re-elected in its entirety, with the following exceptions:

Eastern region: H. K. Norton, trustee, New York Susquehanna & Western, succeeds C. J. Graham, president, Pittsburgh & West Virginia.

Southwestern region: L. A. Watkins, vice-president and treasurer, Missouri & Arkansas, replaces W. B. Anderson, vice-president, Ashley, Drew & Northern; Frank L. Brantley, vice-president, Paris & Mt. Pleasant, replaces R. W. Wortham, president of the same road.

Western region: H. W. Ward, vice-president, Minneapolis & St. Louis, replaces G. C. Wright, president, Minneapolis, Northfield & Southern.

Southern region: J. H. Kansinger, president, Live Oak, Perry & Gulf, replaces P. H. Enochs, president, Fernwood, Columbia & Gulf.

Grade Separations Will Not Solve Growing Crossing Menace

Have a place in long-range picture, but immediate needs can be met only by a concerted effort on the part of responsible agencies to develop adequate programs of warning and protection

By ALFRED BENESCH
Consulting Engineer, Chicago

DURING the years 1942 to 1945, inclusive, when every normal domestic problem was overshadowed by the major problems and activities of winning the war, the problem of safety at railroad-highway grade crossings was necessarily neglected and set aside. Fortunately, during these same years this problem became somewhat less acute as a result of the restrictions imposed on highway speeds and the consumption of gasoline.

Today, with the war over and these restrictions removed, highway traffic is increasing in volume and is again moving at pre-war speeds, for which reason it is becoming more and more important that greater attention be directed toward safety at the many thousands of grade crossings that still remain. On previous occasions, the writer has emphasized the impossibility of separating the grades at all of these crossings, not only because the huge cost of such separation would be unsound economically, but because the task would be impossible of realization. Furthermore, based on personal experience, he no longer believes that grade separations provide the maximum protection for the investment made.

Automatic flashing-light signals should be provided at all crossings of paved highways at grade with single-track main lines

At present, the cost of bridge construction, compared with pre-war costs, has increased from 60 to 80 per cent. Many of the materials essential to the erection of grade-separation structures are still scarce and, in some cases, practically unobtainable. For these reasons, both highway and railway engineers must look forward, more than ever before, to the protection of the traveling public at grade crossings by means other than that of grade separation.

Grade separations at many crossings may still, and should, be the ultimate goal, based on a number of reasons, but in not a few instances the attainment of this goal is still far away. Immediate results in safety can be obtained quickly, however, and at substantially lower cost, through the construction of suitable protective devices, without encroaching to any large extent on the supply of scarce materials essential for building construction. In this connection, the writer believes that some states, lacking effective regulations, should enact definite laws for the protection of highway crossings at grade, and that all states should enforce vigorously those laws that pertain to these safety requirements.

It does not seem debatable that the protection of highway-railroad grade crossings is the joint responsibility of highway and the railway authorities; that standardization of the form of this protection, while now well advanced, should be made complete; and that a research organization should be established for the purpose of extending and creating types of protection, based on the most modern scientific developments. It is regrettable that not enough effort is being put forth to establish an effective program for the promotion of safer railroad-highway grade crossings.

Short-Arm Gates Effective

To illustrate what can be done to attain this end, one project for the promotion and construction of which the writer lent a helping hand while he was an active state highway engineer, will be described briefly.

In 1939, at Lincoln, Ill., seven crossings at grade of city streets (or state highways within the city) over the high-speed, double-track main line of the Alton were given protection by automatic short-arm gates, in connection with flashing-light signals. At some of the crossings the gates are controlled manually when other than the main tracks are occupied with switching movements. To complete the safety program, five additional crossings, selected because they served unimportant streets, or because their abandonment necessitated only short detours, were closed to traffic.

According to the records of the Illinois Commerce Commission, there were 10 accidents at these various crossings in the period from 1932 to 1939, resulting in 15 deaths and 9 injuries, while, since the installation of the protective devices and the closing of some of the crossings in 1939, no accidents have occurred. The foregoing comparison covers two periods of approximately the same length, before and after the installation, so it can scarcely be claimed a chance record. This achievement is not only impressive, but presents a lesson which is obvious—that the scheme followed at Lincoln can be applied with equally effective results in many other communities. Recommendations, based on this and many similar experiences follow:

(A) The installation of automatic flashing-light signals at all crossings of paved highways at grade with single-track main lines. Where high-speed traffic occurs on either the railway or highway, automatic crossing gates should be added.

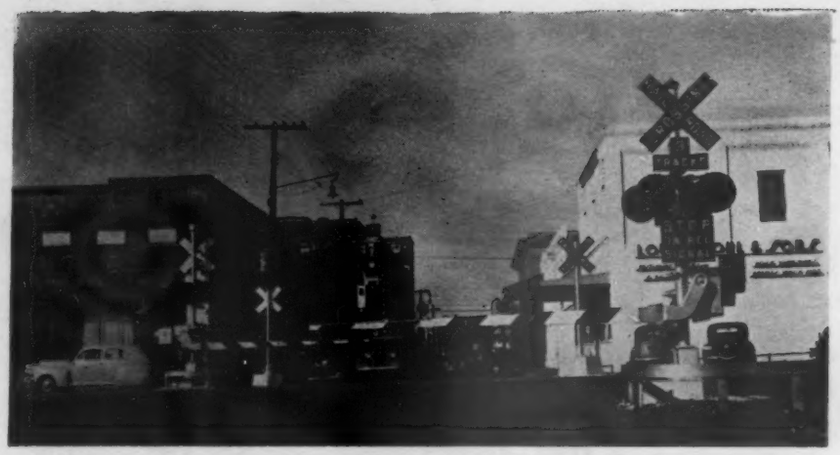
(B) The installation of short-arm automatic gates and flashing-light signals at all crossings at grade of paved highways and multiple-track main lines.

(C) A program for protection for all city streets in communities through which trains are operated at high speeds, using gate protection at important streets and closing the crossings of unimportant streets.

(D) A concerted effort on the part of responsible agencies to develop a program of warning and protective installations along the lines discussed.

Where traffic is extremely heavy, grade separations are in order, mainly to expedite both highway and railway traffic. However, much more in the way of safety can be accomplished with the same expenditure of money through the installation of suitable warning and protective devices at a large number of crossings.

The problem is not a simple one, but if its solution is undertaken diligently and intelligently, gratifying results will be achieved through the saving of many lives.



At all crossings of paved highways and multiple-track main lines, and wherever high-speed traffic occurs on either the railway or highway in single-track territory, both automatic flashing-light signals and automatic crossing gates should be installed

* * *

Photo by Arthur T. Knowles

The Pennsylvania's Yard at Enola, Pa.

Traffic Clubs Hold Important Meeting

Speakers tell members of the railroads' need for additional revenue—stress professional aspects of traffic management and its relation to national welfare

THE twenty-third annual meeting of the Associated Traffic Clubs of America, the first since February, 1944, was held on September 30 and October 1 and 2, at the Neil House, Columbus, Ohio. There were 555 delegates registered at the convention. Professionalization of traffic management was the theme of the meeting.

Gustav Metzman, president of the New York Central, gave the principal address of the session, speaking at a dinner meeting on October 1. An abstract of Mr. Metzman's talk appeared in the *Railway Age* of October 5, page 569.

Low Rates vs. Good Service

John S. Burchmore, counsel for the National Industrial Traffic League, speaking at the afternoon session on October 1, in behalf of the Associated Traffic Clubs Foundation, said that there is not yet fully started a movement to acquaint the public and management with the dignity, importance and the value of the traffic management function. Many corporations do not have competent top ranking traffic men in their employ and many corporation presidents do not have any realization of the importance of the traffic management function, he said.

Mr. Burchmore condemned the shortsightedness of some traffic men who asserted they had no interest in whether or not the carriers earned sufficient income to continue their operations. "What can it profit any large manufacturing company to save a nickel in its freight rates when it cannot get any cars because the railroad has not money enough to build them?" he asked.

At the session of October 2, Wilbur LaRoe, commerce counsel, Washington, D. C., and a past president of the Association of Interstate Commerce Commission Practitioners, spoke in behalf of the American Society of Traffic and Transportation, on the subject "Professionalization in the Field of Traffic and Transportation."

Mr. LaRoe declared that the success of a democracy "depends largely on the ability of volunteer groups to organize and conduct themselves in such a manner as to contribute to the general good," and he called upon traffic men to organize so as to accomplish this goal. He pointed out that for many years lawyers and physicians were not recognized as belonging to a professional group.

"The tremendous growth and importance of transportation and its vital relation to the public welfare make absolutely necessary the recognition of a professional group of men who are specialists in transportation matters," he said. "It is a highly specialized field which requires years of study and training for its mastery, and even then the mastery is not really attained. In the light of these facts it is an astounding thing that we have never had in America an institute which specializes in the recognition and training of professional transportation men. This society fills a very bad gap in our national structure.

"In discussing transportation problems we must not overlook the constant danger of socialization of our railroads. There are many in high places who would like to see it brought about. In my opinion it would have occurred before this except for the wise administration of the Interstate Commerce Act by the Interstate Commerce Commission and the heroic and almost miraculous part which the railroads played during the war. No other factor helped more toward the winning of the war. But as we enter a period of peace, the subversive elements will again be at work and we must be on our guard.

Technique of Socialization

"The technique for bringing about socialization is comparatively simple—it lies in paralyzing our transportation system through strikes. The first step toward socialization of the coal mines has already been taken, and Washington is wondering whether the mines can ever be successfully restored to their owners. The handwriting on the wall is so clear that he who runs may read, and we had better read with thoughtful care. What better protection can there be against socialization than a body of skilled transportation experts who, in addition to being masters of their profession, are real lovers of America?

"The Interstate Commerce Commission is now struggling with one of the most difficult cases it has ever tackled, namely, Ex Parte 162. That case is so difficult that the commission needs and invites the help of every lawyer and every traffic expert who can throw light on the problem.

Revenues Must Be Increased

"The difficulty of Ex Parte 162 is readily understood when you realize that the increased expenses to which the railroads have been subjected during the past year more than equal the total pre-war net railway operating income of the railroads. In analyzing railroad financial results, the most helpful figure is net railway operating income because it represents the amount available for interest and dividends after taxes are paid. In good years it is around $1 billion, in bad years about $500 million. The best calculation which I can make for the year 1946 is that it will be $547 million, or only about half enough.

"But this fails to take into account the additional cost for railroad retirement under the Crosser bill of $90 million, additional wage adjustments of $12 million, and it also fails to take into account the fact that if we add to the revenues we must allow about 38 per cent for taxes. Does this mean $600 million or $700 million or $800 million must be added to the revenues of the railroads to keep them strong? That is precisely what it means, and an unwelcome task now in the hands of the commission is to find how that enormous sum of additional revenue can be raised in fairness to the shipping public."

Mr. LaRoe observed that the present condition was not primarily the fault of the railroads themselves, but rather was the result of enormous increases in wages and the price of materials, brought about in large part by the actions of government agencies. Pointing to the difficulties of securing proper rate adjustments, he said that the services of recognized expert traffic men were as essential as those of competent commerce counsel and that those men are entitled to the same recognition and professional standing as lawyers.

In a brief talk on the importance of the traffic function in industry, A. G. T. Moore, traffic manager of the Southern Pine Association, New Orleans, La., declared that the freight rate is the factor in determining the market area. The efforts of the sales department, he

said, cannot begin until proper freight rates are established. Mr. Moore likewise urged the encouragement of organizations designed to make traffic management and transportation a profession and to raise the standards and qualifications of that work.

At a business session, a resolution addressed to President Truman called attention to the present vacancy on the I. C. C. and the impending vacancy to result from the expiration of Commissioner Miller's term at the end of the year and urged that the President appoint men to the commission from the ranks of those who have knowledge of and direct participation in transportation matters.

Addressing the morning session on October 1, Dr. M. O. Ross, president of Butler university, Indianapolis, Ind., stated that the economic and business history of the United States can be divided roughly into two parts. The first, he said, extended approximately until 1920 and was characterized by a scarcity of goods of all types and a consequent emphasis on improving the methods of production so as to be able to turn out sufficient goods to meet the demand.

Distribution Is Problem

Recently, however, he held, except for a temporary interruption caused by the war, productive capacity has been more than equal to demand and the problem has now become one of finding, maintaining, developing and financing markets for the productive capacity of the nation. Admitting that at present there is again an "economy of scarcity" he forecast a quick return to a period of abundance and a serious problem of distribution.

Dr. Ross termed the failure to solve this problem of distribution one of the prime reasons for the economic debacle of 1929, but asserted that the New Deal was an unsuccessful attempt to solve the problem. He declared that the proposals of some to turn over the entire task of solving the problems of the relationship of production and distribution to government had worked well in Russia, Nazi Germany and Facist Italy, where the primary purpose was to wage offensive war, but had failed when tried elsewhere.

Dr. Ross proposed as an alternative to leave the matter in private hands, saying that this method would make production more efficient, leave labor freer because of its ability to bargain with many employers, rather than with only one, the government, and would, in addition, result in faster technical improvement.

A major task of individuals, he said, was to persuade economic and political leaders to remove the economic and political barriers between nations. He asserted that capitalism and democracy are complex economic and political systems which can exist only during periods of comparative stability and he declared that continued use of such devices of economic warfare as blocked currencies, cartelization, bilateral trade agreements and a host of others can only result in military warfare and more confusion with the end result that communism and socialism will result as the new world order.

Election of Officers

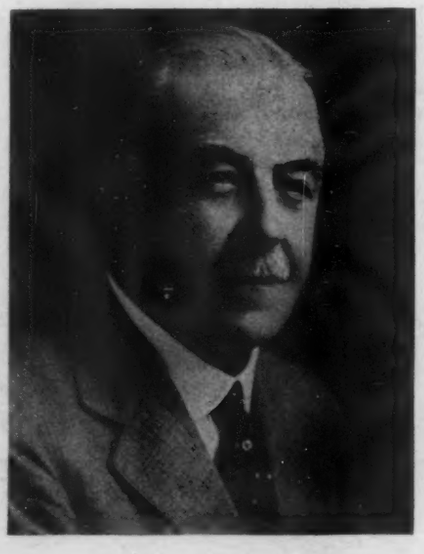
On October 2, a meeting of the new board of directors was held, at which time J. M. Fitzgerald was again elected chairman of the board. Baltimore, Md., was selected as the place of the next meeting, to be held in October, 1947.

Officers elected on the closing day were: Charles H. Beard, general traffic manager, Union Carbide & Carbon Corp., New York, president; Frank L. DeGroat, general traffic manager, Joseph Schlitz Brewing Company, Milwaukee, Wis., executive vice-president; J. P. Krumech, traffic manager, American Car & Foundry Co., New York, regional vice-president; Gordon D. Riley, general traffic manager, Radio Corporation of America, Camden, N. J., regional vice-president; R. M. Wolf, manager International Forwarding Company, Seattle, Wash., regional vice-president. Vice-presidents of other regions were re-elected.

New directors elected for three year terms were: William Malone, traffic manager, Lever Brothers Company, Cambridge, Mass.; Ellen J. Raymond, assistant general freight agent, Green Bay & Western, Chicago; John B. Keeler, assistant general traffic manager, Koppers Corporation, Pittsburgh, Pa.; new directors elected for two year terms: W. O. Narry, traffic manager, Richfield Oil Company, Los Angeles, Cal.; J. P. Gudger, traffic manager, Gulf Oil Corporation, Houston, Tex.; Madge Henderson, Empire Freight Company, Los Angeles; Carl Giessow, transportation director, Chamber of Commerce, St. Louis, Mo.; and for one year terms: G. A. McNamara, general freight traffic manager, Minneapolis, St. Paul & Sault Ste. Marie, Minneapolis, Minn.; and Vernon Taylor, general traffic manager, Sloss-Sheffield Steel Company, Birmingham, Ala.

R. A. Ellison, manager, Transportation Department, Chamber of Commerce, Cincinnati, Ohio, was re-elected secretary-treasurer and Dr. G. Lloyd Wilson, professor of transportation and public utilities, University of Pennsylvania, was re-elected vice-president, education and research. Directors representing other regions were also re-elected.

R. H. Aishton, Retired President of A. R. A., Dies on October 3



R. H. Aishton

RICHARD Henry Aishton, who retired in September, 1934, after 14 years as president, followed by one as chairman of the board, of the American Railway Association, predecessor of the Association of American Railroads, died at his home in Evanston, Ill., on October 3. Prior to his election to the presidency of the A. R. A., in 1919, Mr. Aishton had served as president of the Chicago & North Western and as regional director of the Western and Northwestern regions of the United States Railroad Administration during World War I.

Mr. Aishton was born in Evanston on June 2, 1860, and was educated in the public schools of that city. He entered railway service in 1878 as an axman in the engineering corps of the Chicago & North Western, subsequently serving as rodman, levelman, assistant engineer, superintendent of bridges and buildings,

and division engineer, until 1895 when he was advanced to assistant superintendent.

Mr. Aishton was promoted to superintendent in 1899, and three years later he became assistant general manager. In 1906 he was promoted to general manager, and in 1910 to vice-president in charge of operation. He became president of the North Western in 1916, serving in that capacity until the beginning of federal control in 1918, at which time he became director of the Western region. When that area was divided into three regions, Mr. Aishton was made director of the Northwestern region.

In 1919, when the American Railway Association was reorganized by the Railroad Administration, Mr. Aishton was made president and in 1920, when the A. R. A. was again reorganized, he was asked to become its chief executive in a salaried position. As the head of the reorganized A. R. A., Mr. Aishton was the first to hold that position who was not an officer of an individual railroad, as prior to 1920 the presidency of the organization had been filled for a year at a time by an executive who retained his position on his individual road.

Still Active at 73

In April, 1933, Mr. Aishton, who was then nearly 73, sought to be relieved from active duty as president of the A. R. A. His resignation was accepted with reluctance, and he was elected to the newly created position of chairman of the board, while M. J. Gormley was elected president.

In addition to his duties with the A. R. A., he was elected chairman of the executive committee of the Association of Railway Executives in 1924, and general chairman of the Presidents' Conference Committee on Federal Valuation of Railroads in 1929. When the A. R. A. was dissolved in September, 1934, Mr. Aishton was finally granted his long-sought wish and was permitted to retire.

In all these positions of great responsibility Mr. Aishton's personality, as well as his great experience and ability as an operating officer, were combined to create a quality of inspirational leadership which had its effect on widespread activities of the railroads. In 1932 the American Museum of Safety presented to him a certificate of special commendation in recognition of more than fifty years of active and cooperative participation in the promotion of railway operating safety, including in its citation the following tribute: "In a fashion peculiarly and forcefully his own, he has served as the general directing the forces battling on all fronts to make rail transportation safe for passengers and employees."

Radio and Carrier Controls for C. T. C. on Pennsylvania

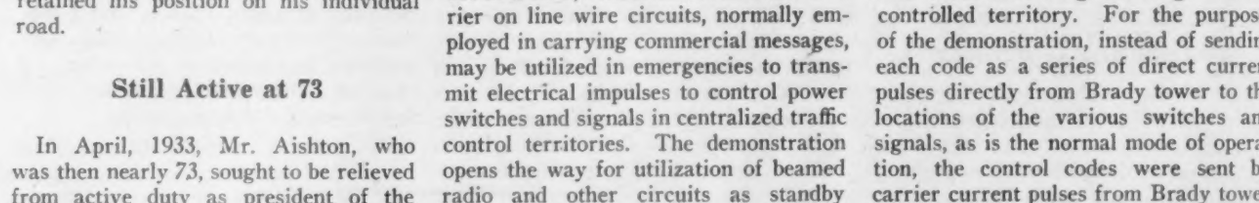
Demonstration shows how high-frequency beamed radio and carrier on telegraph line wires can be used to bridge gaps in emergencies when line wires are damaged

As noted in the *Railway Age* of September 28, page 526, the Pennsylvania demonstrated on September 19, for the first time, that beamed radio and carrier on line wire circuits, normally employed in carrying commercial messages, may be utilized in emergencies to transmit electrical impulses to control power switches and signals in centralized traffic control territories. The demonstration opens the way for utilization of beamed radio and other circuits as standby channels to keep trains moving when regular railroad communication lines may be damaged by floods or sleet storms.

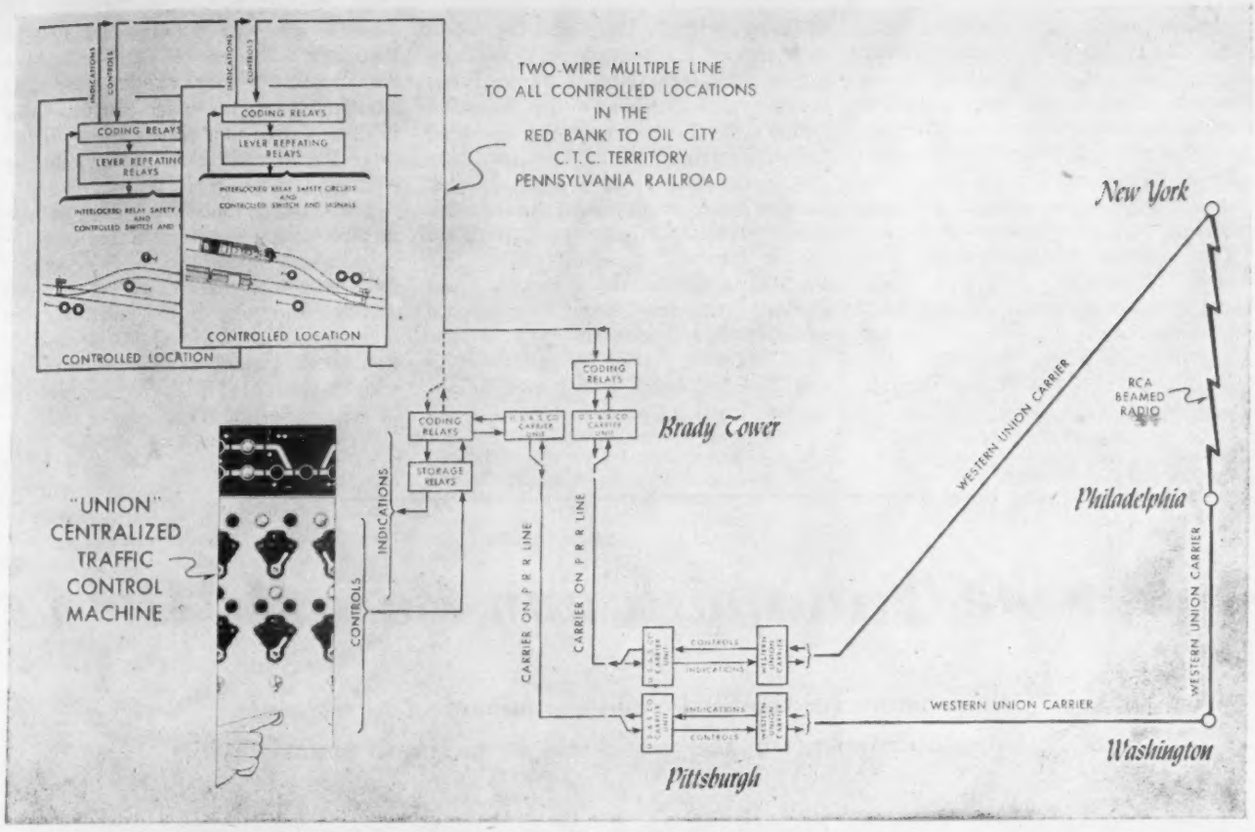
The test, conducted at Brady tower, 65 miles north of Pittsburgh, Pa., on the Pennsylvania line from that point to Buffalo, employed a special thousand-mile linking of existing wire, cable and beamed radio circuits. The test was arranged by the Pennsylvania, in cooperation with the Radio Corporation of America, the Western Union Telegraph Company, and the Union Switch & Signal Company.

A centralized traffic control machine in Brady tower controls switches and signals between Red Bank and Oil City, a distance of 52.8 miles, by means of code signals transmitted over a pair of line wires extending the length of the controlled territory. For the purposes of the demonstration, instead of sending each code as a series of direct current pulses directly from Brady tower to the locations of the various switches and signals, as is the normal mode of operation, the control codes were sent by carrier current pulses from Brady tower to Pittsburgh over Pennsylvania wires by means of the Union Switch & Signal Company's coded carrier control, thence via Western Union aerial and cable circuits via Washington, D. C., to Philadelphia, then by beamed radio to New York, and back to Pittsburgh over Western Union, and over railroad wires to Brady tower.

At Brady tower the pulses were converted from carrier current to direct current, and sent over the regular code line to locations along the railroad for the operation of switches and signals. Indication codes of similar series of pulses indicating the response of the switches and signals were transmitted in



The 65-mile C.T.C. territory was controlled by communication facilities extending over 1,000 miles



Schematic diagram, showing use of existing line and radio facilities in connection with C.T.C.

the opposite direction to the control machine over the roundabout path described above. Thus, railroad traffic was controlled by codes transmitted over approximately 920 miles of line and 86 miles by air.

Test Details

A more detailed description of the demonstration equipment follows: A control code is sent to the field stations over line wires in the form of a four-second code consisting of a total of 16 long or short pulses during which the line is energized and de-energized. The predetermined sequence of the long and short steps as set up by lever manipulations at the control machine causes one field location to respond selectively to the code. The response at the selected station is the result of registry relay operation during the long steps, and the disposition of the long steps in the code determines which location is selected. In a similar manner, any field station can selectively transmit an indication code to the control machine.

The switches and signals to be operated have corresponding levers on the control machine which are positioned as desired. A code starting button is pushed and coding starts and operates to give the pulses of long and short duration in a predetermined sequence; first, to select the correct station along the railroad and, second, to operate functional relays at this location. In the demonstration, these pulses were converted to carrier current pulses which were transmitted over a railroad telephone line from Brady tower to Pittsburgh, using a frequency of 12.3 kc.

The control pulses were delivered to the Western Union office in Pittsburgh where coordinating circuits are arranged in such a way that the pulses were then transmitted over Western Union carrier telegraph circuits to Philadelphia by way of Washington. By making use of a carrier frequency system with all carrier frequencies below 30 kc., it is entirely practical to transmit as many as 36 independent multiplex telegraph messages in each direction simultaneously on a single pair of line wires. This would permit 144 telegraph operators to send messages simultaneously in one direction, and a similar number in the opposite direction. Thus in this demonstration one multiplex telegraph channel was utilized for the transmission of the C. T. C. pulses while at the same time there could be 140 telegraph messages on the same pair of wires traveling in the same direction.

Beamed Relay Radio

At Philadelphia there are coordinating circuits where the control pulses were converted to a super-high frequency, and "beamed" toward New York. This beaming is accomplished by having the transmitting antenna at the focal point of a reflector which is approximately 4 ft. in diameter. The first such reflector to beam the control code is on top of the Market Street National Bank building in Philadelphia where it sends the beam toward New York. The distance between Philadelphia and New York is too great to span with one "jump" because the super-high frequency beams have much the same behavior as light waves and travel in straight lines. The curvature of the earth is such that with practical height antennae, 30 miles is about the average distance that can be covered. For this reason there are two intermediate repeater stations between Philadelphia and New York. At a repeater station there is usually a steel tower of the general type used in the forest observation service. A receiving reflector four feet in diameter located at the repeater station is in line with the distant transmitter, and the pulses are received, then amplified and applied to an antenna at the focal point of the transmitting reflector of the repeater station which is pointed toward New York.

The beam between Philadelphia and New York has some of the same type characteristics as the carrier telegraph system in that many telegraph messages may be handled at the same time. The

beam can handle 256 multiplex telegraph circuits, so 1,024 operators could transmit telegrams simultaneously in one direction. The control code would require the equivalent of only one telegraph channel so that 1,020 telegraph messages could be on the beam at the same time that a control code was being transmitted.

Two separate frequencies are used between Philadelphia and New York. These frequencies are 3,970 and 4,120 megacycles.

The beamed pulses terminate at a radio reflector on top of the Western Union building in New York. Coordinating circuits there pass the pulses to a carrier transmitted over Western Union lines from New York to Pittsburgh. At Pittsburgh the Western Union's receiving equipment operated Union Switch & Signal Company carrier equipment to send coded 25.4-kc. current pulses on to a field carrier location. In this particular case, the field carrier location is Brady tower. At the field carrier location a sharply tuned 25.4-kc. receiving filter discriminates against other frequencies. Note that there are two carrier frequencies, 12.3 and 25.4 kc., being transmitted in opposite directions at the same time on the one line pair between Brady and Pittsburgh. After the 25.4-kc. pulses are amplified, they are fed through auxiliary apparatus which converts them to d. c. pulses and places them on the code line extending to the switch and signal locations.

The Pennsylvania has again proved its alertness to the practical use of radio in railroad operations. The demonstrations constituted convincing evidence of the awareness of the railroads and their suppliers of the practical application of electronics to railroad services, which commenced with the introduction of continuous cab signaling in 1923.

What the Transportation Corps Is Doing

Its program for the future and a summary of its war-time accomplishments in the movement of men and materials

THE Army Transportation Corps, commanded by the chief of transportation, was established as an emergency agency July 31, 1942 (eight months after Pearl Harbor), as a result of a General Staff decision that full and complete coordination and integration within the army of all highway, marine and rail transportation activities was fundamental to the successful prosecution of the war. Its success in carrying out its war-time assignment led to the decision early this year to continue it as a part of the permanent military establishment.

While the war was in progress the Transportation Corps developed into an organization including a maximum of about 400,300 persons—of whom nearly 300,000 were in uniform and slightly more than 100,000 were civilians. As of August 1, 1946, its strength, not including certain personnel outside the jurisdiction of the chief of transportation, was 65,238 military and 44,493 civilian.

Peace-time Objectives

This organization is still engaged in the transition from war to peace, employing means proved wise in war to shape its peace-time program. War-time installations have been closed out, including four ports of embarkation which were of major importance during the war; nine transportation zones; holding and reconsignment points and other installations superfluous in peace-time. The transportation zones have been merged with army field organizations, with each army commander having on his staff a group of transportation officers.

To realize its peace-time objectives—more efficient transportation service for the army and preparedness for any emergency of peace or war—the Transportation Corps is engaged in research, education, experiment and training in new and better means and methods of moving men and material. Already through its Research and Development Division, its Technical Advisory Board (a representative group of executives in all fields of transportation) and its Transportation Corps Board, it is busy examining every detail of captured enemy equipment and the records of enemy transportation methods and techniques. It has sponsored and is participating in continued experiments with new applications of cycloidal propulsion. It is working in cooperation with shipbuilders toward the perfection of marine electro-coatings developed during the war by one of its officers for the protection of ship hulls from rust and corrosion and toward the perfection of an electrolytic cleaning process expected to outmode "chipping" the hulls of vessels.

The long-reaching education and training program of the Transportation Corps includes its establishment of the transportation center at Fort Eustis, Va., where it will provide training for enlisted men in more than 90 different skills ranging from Diesel mechanic to margine engineer, from locomotive engineer to electrical repairman, from armorer to amphibian truck driver. In addition to its facilities for training all Transportation Corps personnel the center will provide instruction for post and staff transportation officers.

Officer Training

The educational and training program for regular officers contemplates within their first year of service a three-months basic course at Fort Benning, Ga., and a basic branch course of five months at Fort Eustis. A three-months course also will be offered at Fort Eustis for graduates of officer candidate schools, reserve and National Guard officers, those from other services and from foreign countries. There will be an advanced technical course of ten months for regular officers with three to ten years' service with a three months associate course for reserve, National Guard and transportation officers and officers from other services. More advanced phases of the program continue through the various army staff schools and colleges. In addition eight American colleges and universities are providing graduate work in transportation subjects for eligible officers.

The reserve officers training program of the Transportation Corps contemplates "activation" of 30 to 35 units of 250 men each, of which seven probably will be set up this fall. Arrange-

ments are nearing completion for extension-course instruction for Transportation Corps reserve personnel and a large number of officers holding commissions in the reserve are reported to have expressed interest in these courses.

The Transportation Corps recently has made available statistics summarizing its accomplishments from the time of its organization through July of this year. These indicate that in the so-called zone of the interior 40,541,261 troops were moved by rail and 1,144,399 by bus in groups of 40 or more and that (April, 1943-July, 1946, inclusive) 7,889,510 requests for individual and small-group travel were handled by the corps' reservation bureaus.

From Pearl Harbor through July of this year army freight shipments in the zone of the interior totaled 349,071,700 tons. Between July, 1942, and January, 1946, 2,392,120 tons of l. c. l. freight were consolidated into carload lots at army-navy consolidation stations. More than 230.1 billion ton-miles of army freight were handled by domestic railroads for the Transportation Corps.

Ocean transportation conducted by the corps through July of this year included embarkation from American ports of 8,420,197 troops and other passengers; the return to the United States of 7,417,001 troops and other passengers, and the evacuation to the United States of 512,304 army hospital patients and 56,009 army dependents. From December, 1941, through July, 1946, 136,326,335 measurement tons of cargo were shipped overseas by the army, and 16,307,698 measurement tons of cargo were returned through United States ports from overseas.

Outside this country the Transportation Corps operated 65 ports of embarkation and debarkation, 46,500 trucks, and 30,000 miles of military railroads, a large part of which had to be rebuilt and rehabilitated. At a total cost of $2,052,000,000 the corps procured 3,809 locomotives for the army and 3,315 for lend lease, 50,114 freight cars for the army and 53,600 for lend lease, 14,000 small vessels for the army and 1,000 for lend lease.

While the Military Railway Service is relatively inactive in peace-time, the Transportation Corps points out that it still performs many other functions for the army. Among these are the following:

1. Submits technical and administrative advice and recommendations to the Secretary of War, Chief of Staff and other officers.

2. Represents the War Department in obtaining allocations of shipping from appropriate government organizations and directs the application of shipping available to meet the requirements of the army.

3. Prepares and disseminates information regarding the status of troop and freight movements, location of ships, ship movements, and ship and cargo losses pertaining to the army.

4. Maintains liaison for the War Department and negotiates with surface carriers, including the railways, the commercial motor transportation industry, the shipping industry, including inland waterways and the Great Lakes, the Office of Defense Transportation, and other government agencies on all matters of surface transportation, including rates, classifications, agreements, and conditions of handling all movements of War Department personnel, freight and cargo.

5. Prepares the budgetary requirements for the movement of War Department freight and exercises staff supervision over the expenditure of these funds.

6. Establishes policies and procedures for the operation of the army ports of embarkation and designs, purchases and exercises staff supervision and control over the assignment and maintenance of War Department floating equipment, except that required for the chief of engineers.

7. Designs, procures, and purchases rail equipment for the War Department and exercises technical staff supervision over the operation of all utility railroads and over the allocation, maintenance, repair, and economical use of all railroad equipment of the War Department.

8. Exercises staff coordination and control over movements of troops and other War Department passengers and War Department-owned-and-controlled freight and cargo within the zone of the interior.

9. Routes all War Department freight of one or more cars or the equivalent of one carload or more if moved by truck, and all inland movements of troops in groups of fifteen (15) or more.

10. Operates the War Department fleet of railroad tank cars.

11. Exercises staff control over the operation of army reservation bureaus.

12. Provides the War Department with traffic and transportation engineering service (except air), including the determination of foreign and domestic transportation capabilities and requirements.

13. Formulates plans, policies, and technical methods governing the training of most personnel engaged in transportation activities, except air.

14. Commands and operates ports of embarkation, the Transportation Corps Board, Transportation Corps supply depot, railroad repair shops, and the transportation training center.

Rail Output Falls Off in 1945

FALLING off slightly from 1944's fifteen-year-high figure, the production of rails in the United States in 1945 totaled 2,417,520 net tons, a drop of 73,136 tons, or 2.9 per cent, compared with 1944, according to figures published in the latest annual statistical report of the American Iron and Steel Institute. This marks the first time for six years in which rail production did not register a gain over the preceding year. Furthermore, while production in 1945 exceeded by a substantial amount the production in each of the 14 years preceding 1944, it did not compare favorably with the years 1929 and 1927, when 3,048,795 and 3,143,264 net tons, respectively, were produced.

In the accompanying table showing the production of rail in 1945 and previous years back to 1927, the output for each year is broken down into four weight groups. In this table it will be noted that production in all weight groups in 1945 fell off from the preceding year, except the heaviest, and that the greatest output continued in the two heaviest weight groups, amounting to 79.2 per cent of the total. Specifically, the weight group including rail sections of 120 lb. or more increased from 894,245 tons in 1944 to 930,987 tons in 1945, a gain of 4.1 per cent. The rail tonnages in the three groups showing decreases registered a drop in the group weighing 100 lb. and less than 120 lb., from 1,032,256 tons in 1944 to 985,310 tons in 1945, or 4.6 per cent; in the group weighing more than 60 lb. and less than 100 lb., a decrease from 401,213 tons to 350,499 tons, or 12.6

(*Continued on page 608*)

Production of Rails by Weight per Yard—Net Tons

Years	60 lb. or less	Over 60 and less than 100 lb.	100 and less than 120 lb.	120 lb. and over	Total
1927	*181,256	†798,226	1,472,155	691,627	3,143,264
1928	*150,301	†662,053	1,348,199	804,639	2,965,192
1929	*158,326	†574,080	1,381,631	934,758	3,048,795
1930	*107,101	†391,079	935,756	664,085	2,098,021
1931	* 56,100	†166,793	555,242	518,546	1,296,681
1932	* 18,654	† 47,374	240,902	143,944	450,874
1933	55,010	63,153	172,488	175,601	466,252
1934	78,495	101,640	550,639	400,677	1,131,451
1935	63,982	112,431	381,696	238,812	796,921
1936	107,644	135,585	684,910	438,089	1,366,228
1937	113,889	218,374	815,280	471,685	1,619,228
1938	50,375	85,177	371,534	190,556	697,642
1939	92,994	83,611	620,992	515,050	1,312,647
1940	140,443	339,672	688,109	510,762	1,678,986
1941	172,264	323,968	820,695	610,924	1,927,851
1942	124,938	438,562	924,851	607,808	2,096,159
1943	164,096	364,715	847,839	750,346	2,126,996
1944	162,942	401,213	1,032,256	894,245	2,490,656
1945	150,724	350,499	985,310	930,987	2,417,520

* Under 50 lb. per yd.
† 50 and less than 100 lb. per yd

Recent Developments in Speed Controls

Discussion of air-brake devices on passenger cars for high-speed service—"Sectional bookcase" brake valve—The coming Load Compensating Brake for freight cars

By C. D. STEWART

Vice-President, Westinghouse Air Brake Company

NEW brake devices for modern passenger cars cover a wide range of requirements, included among which are several forms of control that supplement the conventional air brake to give (1) faster response; (2) more flexible control; (3) the practical use of higher braking forces; and (4) greatly reduced likelihood of sliding wheels.

In anticipation of these supplementary controls we designed the D-22 control valve about ten years ago so that although its basic functioning is similar to the well-known universal control valve, it differs from it in one important respect. Instead of the air flowing directly by way of the control or triple valve to the brake cylinders, a pneumatic relay valve is interposed that, under certain conditions during a brake application, isolates the triple valve and directly controls the flow of air from and to the brake cylinders. This arrangement permits independent control of the brake-cylinder pressures whereby the braking force initiated by the engineman may be altered locally to meet changing conditions during the stopping of the train.

Before discussing these local independent controls, however, it will be well to say a word on the two distinctly different systems of bringing air under pressure to the relay valve. The first involves the use of conventional triple or control valves wherein a brake-pipe reduction initiated by the locomotive brake valve causes the first triple valve in the train to move to application position and it, in addition to developing pressure to the relay valve, transmits the brake application through the train brake pipe by the usual means of local brake-pipe venting.

Electrical Control

The second system involves the use of the more recently developed electrical control that is installed in parallel to the conventional pneumatic system. No brake-pipe reduction is involved for service braking, but instead an electric circuit running through the train is energized by the locomotive brake valve to cause the development of pressure on the relay valves through the medium of magnet-operated control valves. The brake action is simultaneous on every car in the train and effects material savings in time in two ways. First, the time required for pneumatic transmission is eliminated; and second, because the response is substantially instantaneous and simultaneous, the engineman can judge the requirements much more accurately and thereby regulate his varying permissible speeds more closely. Very material savings in running time are thereby effected. From the standpoint of the customers' comfort, smoother train operation is realized.

The brake-cylinder pressure on each car equipped with a relay valve will correspond with that at the face of the relay valve until a local condition makes it desirable to alter it. Let us assume several such conditions.

High-Speed Operation

First, there is the situation associated with high-speed operation. It is well known that the friction of the brake shoes is low when the wheel speed is high. Heretofore it has been the practice to limit for emergency braking the maximum force that could be tolerated for the low-speed portion of the stop to avoid excessive wheel sliding. Because this force was lower than could be used at the higher speeds and still avoid wheel sliding, the stopping distances were of necessity longer than they otherwise needed to be. From this it is apparent that to provide the permissible braking force for the varying train speed, a variable brake-shoe force controllable by the change in train speed is required. To meet this requirement the speed-governor control was developed, with which the control of the brake shoe force may be varied in substantial conformity with the variation in the brake shoe friction.

This control is readily incorporated in the relay valve whereby the brake-cylinder pressure is lowered as the train speed decreases. This control that is a supplement to the conventional brake equipment consists of an electric speed-recording governor mounted on one axle of each car, a relay cabinet containing several electric relays, each one of which is designed to respond to different and particular car speeds, and a pneumatic differential adjunct to the relay valve in which a different pressure value is associated with a particular speed-sensitive electric relay. Basically this provides step control of pressures but by properly tuned exhaust chokes a substantially continuous reduction in brake-cylinder pressure is obtained.

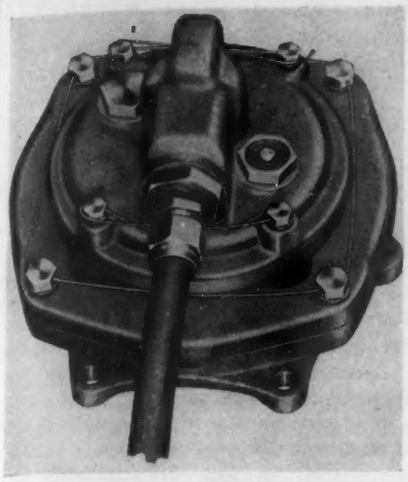
Variable Ratio

Specifically the basic braking ratio values for emergency operation are 250 per cent from maximum train speed to 65 m. p. h., followed by a gradual reduction to 200 per cent between 65 and 40 m. p. h., followed by a further gradual reduction to 150 per cent between 40 and 20 m. p. h., and a still further gradual reduction to 100 per cent from 20 to 0 m. p. h. This compares with 150 per cent maximum braking ratio held constant throughout the stop for non-speed-governor control equipment. Thus it will be seen that braking forces can be employed for high speeds very much in excess of what is practical without automatic means for regulation. Of equal importance are the lower braking forces for 20 m. p. h. and under that can be used without the sacrifice of over-all stopping distance and with material benefit from the absence of wheel sliding and increased comfort to the passenger.

Buyers of new cars whose operating conditions at the time do not justify the installation of speed-governor control may have the differential adjustment feature of the relay valve installed and set for the 150 per cent braking ratio value. At that time the brake rigging is made suitable for the ultimate use of the 250 per cent braking ratio and when speed governor control is required it can be added without the necessity of discarding any of the original equipment. This practice has been followed in the building of a number of cars now in service.

A second situation that makes it desirable to have the ability to vary locally the brake cylinder pressure is low rail

This article is adapted from a paper presented at the annual meeting of the Railway Fuel and Traveling Engineers' Association on September 5.



The Decelostat wheel-slip control momentarily reduces the braking force on wheels that are slipping

adhesion that may cause wheel sliding. As we have said previously, the speed-governor control provides for higher braking forces than can otherwise be used and with actually lower possibility of wheel sliding. However, there are occasional instances of subnormal rail adhesion when relatively low braking force can cause the wheels to slide. For such temporary situations the wheel slide protection was developed.

This device, termed a Decelostat, functions to reduce momentarily the braking forces on the wheels that are slipping and thereby permits their resuming train speed. The activating mechanism consists of an inertia device mounted on one journal box of each axle and rotated at axle speed by a suitable driving means, and a brake-cylinder pressure-lowering device associated with each truck. The inertia device is non-responsive to the normal rates of wheel deceleration developed during a stop, but it is immediately responsive to a deceleration rate in excess of normal such as occurs when a wheel is slipping into a slide. The pressure control device is thereby caused to reduce promptly the brake-cylinder pressure for a short interval of time required to permit the wheel to resume rotation at rail speed. The initial brake-cylinder pressure is then immediately restored.

Automatic Sanding

One such functioning is usually sufficient during a stop because subnormal rail adhesion is generally limited to highway crossings or similar restricted areas. If, however, there are situations wherein low adhesion is more extensive and perhaps more common, such as for example at water pans or in certain sections of the country where local seasonable conditions are adverse, then it is desirable to provide means for improving the rail adhesion on the first wheel slip indication. For such situations automatic sanding is readily associated with the wheel-slip detector to sand the rail during the stop following this first wheel-slip indication. This method of controlling the sand automatically has several marked advantages. It limits the use of sand to the occasions when it is actually needed, thereby conserving sand, and it applies the sand at exactly the right time and place.

Muffling Signal Discharge

Any manual control of sanding for braking purposes may apply it too late when it can do more harm than good or, in order to avoid this, the sand may be started considerably ahead of its need and much more sand be used than is required.

An additional improvement that is of a very minor character but important to passenger comfort is the muffling of the car discharge valve of the pneumatic signal system. We have listened to the noisy blast of the signal system for so many years that we have come to taking it for granted, but today's passengers are noise conscious and the present device has come in for its share of criticism. A new car-discharge valve has its exhaust sheathed in a muffler that produces a whisper with which the most exacting customer would have difficulty finding fault.

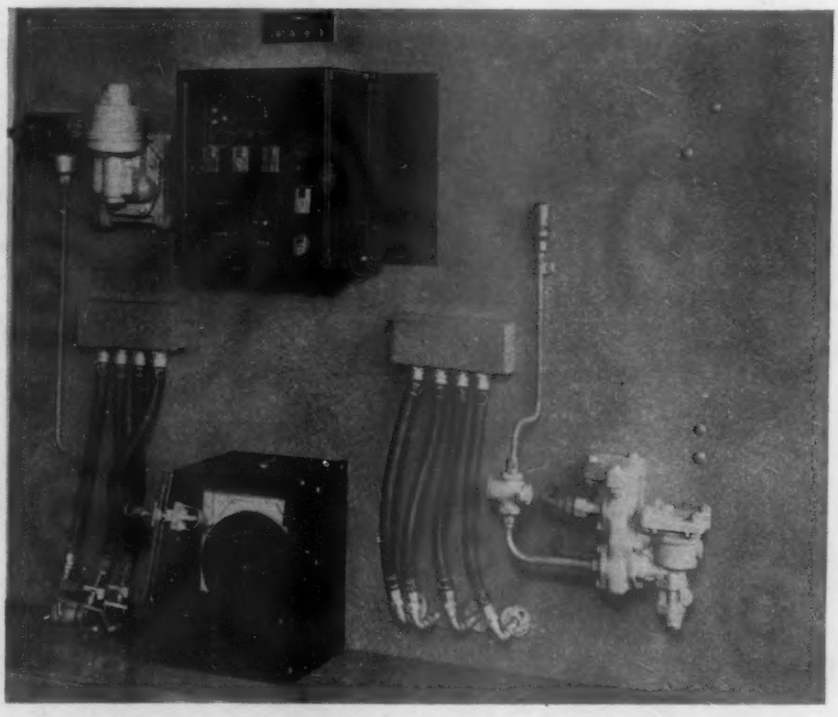
Finally the use of this same pneumatic signal system has been pressed into the additional service of warning the engineman of an impending hot car journal.

Hot Journal Detection

Delays and accidents due to hot journals have stimulated thinking of a means for warning the train crew that a car or locomotive journal is overheating. Many forms of detectors have been developed and tried over the years. Some of these give off a characteristic odor, others emit smoke when the journal reaches a predetermined temperature. Still others employ a thermometer type of gas-filled bulb that, on expansion, causes the flashing or sounding of an alarm.

Little scientific study of this subject has been made until recently and one of the interesting discoveries is that the critical temperature for a journal bearing varies with the change in ambient temperature. It is obvious that a bomb or thermal type of temperature detector will function at its designed operating temperature regardless of what the surrounding temperature may be and, therefore, it is incapable of detecting the critical bearing temperature except for one condition of the surrounding atmosphere. To have a temperature checking device accommodate itself to varying ambient temperatures appears at first to be most difficult of accomplishment since it appears to involve a complex compensating means.

This was true until an exceedingly simple means was discovered in an adap-



The hot box detector demonstrator rack showing the principal parts of the apparatus

tation of the well-known wheatstone bridge instrument which is normally in electric balance and reacts to an electrical unbalance in its circuit. As adapted to detect dangerous temperatures in a car bearing, certain resistance legs of the bridge circuit are installed in the car journals, one resistance unit to a journal, and the others are placed in a suitable electrical cabinet. Obviously as the atmosphere surrounding the cabinet varies with the seasons, the balancing requirement of the bridge circuit is automatically varied. This situation corrects the journal temperature device so that it responds only when the danger from overheating is imminent. Thus no false warnings are sounded nor does the device fail to notify under any variation in weather temperature.

The electrical device having detected a journal bearing approaching a dangerous temperature, can actuate one or more of several alarm devices. A light or a bell may be energized within the car that is developing the hot journal or the engineman may be warned by way of the air signal system. This latter scheme appears to be the most practical from all points of view.

To initiate a pneumatic signal from the hot-box detector the electric circuit includes an electro-pneumatic valve which is connected into the pneumatic signal system. Normally the magnet of this valve is energized and thereby holds closed an atmospheric vent from the signal line. A journal bearing approaching dangerous temperature causes an unbalancing of the wheatstone bridge circuit whereupon an electric relay is caused to open the electric circuit that normally connects the magnet valve with the car battery. The exhaust valve is thereby permitted to open, the signal line pressure is lowered and the signal whistle in the engineer's cab is sounded.

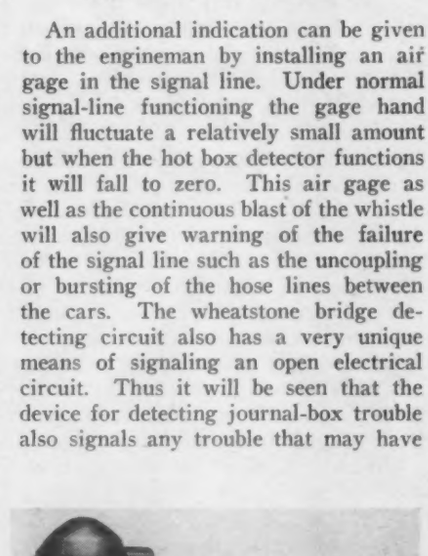
Simple Operation

Some have expressed the wish to have a whistle code produced by the defective bearing. This can and has been done but it is much simpler and in our judgment equally satisfactory to have this hot-journal detector produce one long continuous blast of the locomotive signal whistle. This can be done in a very simple manner. The magnet valve on being de-energized by the hot-journal detector circuit opens the signal line to atmosphere. The resultant continuous discharge of air being at a greater rate than the charging valve on the locomotive replenishes it, permits the signal line pressure to fall steadily. This fall in pressure causes the signal whistle in the engineman's cab to blow until the pressure in the signal pipe is almost depleted, which is accomplished in one to five minutes depending on the length of the train.

If a longer continuous signal is found to be desirable the blast can be extended through the addition of a simple transfer valve installed between the locomotive main reservoir and the signal whistle. The transfer valve is normally held inoperative by the signal-line pressure but when this is reduced to a predetermined minimum of say 10 lb. the relay functions to isolate the almost depleted signal line from the signal whistle and to connect the main reservoir supply to it. Thus the signal can be made to blow indefinitely.

Open Circuit Checked

An additional indication can be given to the engineman by installing an air gage in the signal line. Under normal signal-line functioning the gage hand will fluctuate a relatively small amount but when the hot box detector functions it will fall to zero. This air gage as well as the continuous blast of the whistle will also give warning of the failure of the signal line such as the uncoupling or bursting of the hose lines between the cars. The wheatstone bridge detecting circuit also has a very unique means of signaling an open electrical circuit. Thus it will be seen that the device for detecting journal-box trouble also signals any trouble that may have occurred to it as well, so that it is its own checking device.



Type DSE-24-T engineman's brake valve

Locomotive Control Devices

Turning now to the locomotive equipment we find it has undergone as diverse changes as have the passenger cars. The new No. 24 type brake valve is in many respects the same as its predecessor, the No. 8. It differs from it and all other predecessors in that it is built like a sectional bookcase. There are five basic sections in the pedestal and there are several types of three of these sections. Which type is selected for a particular section is dependent upon the overall functional requirements.

Assuming the locomotive is intended for conventional freight service, then the top or brake-valve-handle bonnet section is of the simplest form and corresponds in most respects to the top portion of the No. 8 ET. If, on the other hand, the locomotive is intended for high-speed passenger service with electro-pneumatic as well as pneumatic control, the brake-valve top will be suitable for operating either control by the same brake-valve handle. The selection of the control is made by declutching one type of brake-applying means and engaging the other, both of which are installed within this brake-valve top. There are five brake-valve top sections to choose from and any one of these may be applied to the remaining sections of the pedestal at any time. Thus unforeseen changes in operating conditions can readily be provided for at any time with minimum change and expense.

The second section is the same type for all forms of brake-valve pedestals.

The third section is at present in three types ranging from a simple filler block that carries the numerous air passages through it, to a complex casting containing an automatic brake-application mechanism. The purpose of this application device is to produce a service application of the brakes without any action on the part of the engineman, in the event of either a train-control reaction or the engineman becoming incapacitated. A third choice of this section contains a simpler valve device that produces emergency application of the brakes under similar circumstances.

The other sections are functionally the same for all pedestal combinations although they differ slightly in construction for Diesel and steam locomotives.

In connection with passenger-car equipment we discussed the use of 250 per cent braking ratio. It is equally desirable to brake the locomotive as near to this value as is practical. It is not quite as simple to do, however, because the variation in weight of the passenger car due to load is very small whereas

the variation in weight of a locomotive tender is not only large but changes continuously due to the consumption of fuel and water. To provide a substantially constant braking ratio on the tender a variable load mechanism is added to the conventional locomotive equipment. This device in response to the varying weight of the water in the tender, continuously adjusts the pneumatic variable-load valve which changes the braking force and thus produces a substantially constant braking ratio. To conserve space on the tender, which usually is at a premium, we have also taken advantage of the availability of the main-reservoir pressure that is at least 25 lb. higher than brake-pipe pressure and with this is produced the necessary braking forces with smaller brake cylinders. A differential relay valve that is the reverse of the one designed for the speed-governor control steps up the conventional brake-cylinder pressures. Thus the diameter of the brake cylinder may be reduced by as much as 25 per cent.

The wheel-slip control is, of course, equally applicable to locomotive use. For avoidance of wheel sliding during braking it functions the same as on the cars. It has one additional application, however, for steam locomotives, especially the duplex type where slipping appears at times to be more prevalent and the slipping of the front set of drivers is more difficult for the engineman to detect. The wheel-slip device is in successful operation on a number of roads, performing one or two functions. When either set of drivers slips in acceleration, the inertia device functions just as it does during rapid deceleration and it can notify the engineman by light or whistle of this event or it can initiate the shutting off of steam to the slipping wheels. To this likewise may be added the automatic control of the flow of sand for the purpose of increasing the rail adhesion. A new form of traction sander has been developed for association with the wheel-slip control that is economical in the use of air and sand and highly resistant to clogging.

Throttle Controls

Another group of devices that are not in any way related to air brakes but that employ pneumatic devices comparable to some of those in air-brake apparatus are throttle-operating controls. These vary in form for the various types of locomotives but are alike in basic principles of operation. The system comprises a pneumatic throttle valve which is substituted for the conventional throttle lever and a pneumatic throttle operating cylinder. Both are self lapping in principle which means that the position of the throttle-valve handle determines the degree of throttle opening. For the steam-turbine locomotive where separate forward and reverse turbines are used, and the reverse turbine is disengaged when the locomotive is moving forward, a mechanical pneumatic interlock is employed whereby the locomotive cannot be reversed while it is moving forward. Simpler forms are used for the conventional steam locomotive and still other forms for Diesel road and switcher locomotives.

Variable-Load Freight Brakes

Finally we come to freight-car equipment. For the modern light-weight car now receiving much attention the variable-load brake has been designed. It automatically alters the braking forces in response to a variation in the car loading. This equipment differs from the locomotive-tender variable load equipment in two respects. First, since the load varies only at the car's destination point, the weighing device is inert except during the first interval of charging the equipment; second, the deflection of the car springs is employed as an indication of the loading of the car.

The variable-load brake also differs from the freight-car empty-and-load brake in that it provides for a wide range of load conditions in the place of the two conditions provided for in the empty-and-load brake. This is of particular benefit, in fact we consider it essential, for those types of cars that have a very wide range of full load weights, such as the box and gondola. There are several reasons for this. When the empty-and-load brake was designed, light-weight cars were not in existence but the lading of the cars requiring this form of brake was unusually heavy; furthermore, the cars were always either empty or filled with a consistently heavy load. In some cases, too, the grades were heavier than average so that a very effective brake was required for the loaded cars and at the same time the braking forces for the empty car had to be held within a practical minimum limit. As a result of all these considerations there was no need to make a registering mechanism capable of registering through small spring deflections. This form of brake is not suitable for box or gondola cars that frequently have relatively light full loads because some particular intermediate full or partial load value would cause the load brake to cut in and the maximum braking forces would be greatly in excess of what is required and desirable.

The load compensating brake, on the other hand, is entirely satisfactory functionally for cars that formerly required the empty-and-load brake and the benefits to be gained by extending its use on all types of cars are those that accrue to both the user and the manufacturer from one form in place of two or more forms of apparatus.

The load compensating brake is simpler in certain important respects than the empty-and-load brake. This comes about from the use of one cylinder in place of two. A notched push rod and latch box are used with the load brake cylinder of the empty-and-load brake for the very important purpose of conserving air. Certain limitations associated with the use of two cylinders in a single set of brake levers make it necessary to have several sizes of brake cylinders. The load compensating brake requires only one cylinder and it in only one size.

In this design we used for the first time in freight-brake construction weight-saving materials wherever it is possible to use them. This together with the elimination of the second brake cylinder has brought about a substantial saving in the weight of the equipment. These materials are at the present time more costly than the conventional ones so that it is necessary to compare the advantages of weight saving with somewhat higher cost.

Finally one additional new device has been developed and is now in trial service on a number of freight cars. This device has the dual function of semi-automatically isolating the auxiliary and emergency reservoirs and bleeding brake cylinder pressure prior to shifting cars as in hump yard service, and automatically restoring the normal arrangement when the brake system is recharged prior to again moving the cars. The device, termed a brake cylinder release valve is installed in the brake-cylinder pipe between the AB valve and the brake cylinder. It normally provides an unrestricted passage for the air but when it is desired to release the brake-cylinder pressure a bleed valve comparable to the reservoir valves is pulled momentarily. The pressure between the AB valve and the brake cylinder release valve continues to hold the valve parts in the position, set up by the trainman, that isolates the reservoirs and vents the brake cylinder, thereby permitting him to pass to the next car without waiting as it is now necessary to do with the reservoir release valves. When the AB valve is released by the restoration of brake-pipe pressure the venting of the brake-cylinder pipe between the AB valve and the brake cylinder release valve permits the automatic restoration of the latter to its normal position.

The time to release the cylinder pressure and later to recharge the brake system is reduced to a small fraction of the time required to bleed and recharge the complete system as is now necessary.

COMMUNICATIONS . . .

For Passengers Who Hate Pre-Dawn Arrivals

WILMINGTON, N. C.

TO THE EDITOR:

Now that the traveler once more can make a choice as to his mode of transportation, it occurs to me that railway companies might well extend to their "cash" customers, without added cost, the same privilege which is accorded to their pass-holding employees; namely of doubling back over a line when such extra travel will avoid a very early arrival at destination.

For instance: From "A" to "B" is 227 miles, "C" is 23 miles beyond "B". By train No. 42, an evening train from "A", "B" is reached at 4:40 a.m. and "C" an hour later. It should certainly be an incentive to the prospective traveler to use the rail line could he know that on his ticket from "A" to "B" he would be permitted, without extra cost, to continue through to "C" and there transfer to a train leaving "C" at 6:15 a.m., arriving at his destination at 7:00 a.m. The advantages: An extra hour of sleep, breakfast in a diner leaving "C", and arrival at his destination "B" at a convenient hour.

(It would of course be indicated on the ticket that in granting the privilege no stopover at "C" or any intermediate point between "B" and "C" would be allowed other than as might be necessary to catch the first connecting train for the final destination "B".)

Many instances, where such a plan would be of advantage and convenience to passengers will occur to any thoughtful passenger traffic officer. The cost to the railroad would be infinitesimal and surely worth while, if thereby a traveler could be influenced to use the railroad, rather than a bus, private car or airplane.

Under rail competition, one railroad, which does not serve both the east and west coasts of Florida, to meet the competition of another line which does run to both Miami and Tampa, now grants (at doubtless some cost to itself) free bus service from Miami to Tampa in order to lure passengers to its line as against the road which serves both cities. The plan suggested above would merely be an expansion of the same idea; but would be directed not at the competition of another rail line, but against the perhaps more convenient schedule of a bus, private car or airplane.

LOWELL WHITE

Supports C. & O. in View of Pullman

STATEN ISLAND 4, N. Y.

TO THE EDITOR:

Apropos of the letter from G. B. Grunwell appearing in your issue of September 7 regarding C. & O.'s advertising dealing with the Pullman situation—apparently Mr. Grunwell's travels were made during or before the war, since only recently I came in from the coast and the bedrooms were far from immaculate. In fact, the only time we saw the attendant was when we stopped en route at some way station and again at the end of our journey for the usual brush off. Bed linens had not been changed in the three-day trip and towels and soap were scarce as hen's teeth. The room was never cleaned.

Now contrast all this with the new Pere Marquette streamliners and we begin to get an inkling of what C. & O. is thinking about regarding comfort and courtesy. Furthermore, if memory serves, was it not C. & O. propaganda that influenced the inauguration of through cars to the coast and southwest? Mr. Grunwell must or should know that Pullman rates are neither prepared nor enforced by the railroads and, now that we are on this subject, how can Pullman justify its rates for sleeping accommodations at the same levels as before, when considered in the light of faster train schedules? The rate for a Pullman bedroom from Los Angeles to New York for two persons runs around $20 a day—high hotel rates I should say!

I do not think C. & O. is directing its fire against Pullman because of some ulterior motive, as suggested by Mr. Grunwell, but solely in the interest of better railroading, which C. & O. and other informed carriers recognize must be forthcoming if the railroads are to hope to compete sucessfully with air travel. Mr. Grunwell is not an ex-C. & O. employee by any chance is he?

I do not condone either the purpose or the necessity for divorcing the Pullman Company from Pullman, Inc., any more than Mr. Grunwell does, but, if this must come as another specimen of New Deal ideology, then by all means let us be certain that Pullman facilities get into the right managerial hands and are not turned over to any agency that is not capable of making proper distribution of its units—if eternal chaos is to be avoided. This I believe is the real purpose behind C. & O.'s propaganda and, after all, who is in better position to know the facts and draw the proper conclusions than the carriers themselves—opinions of New Dealers, Department of Justice and what have you to the contrary notwithstanding?

E. B. ANDREWS

Rail Output Falls

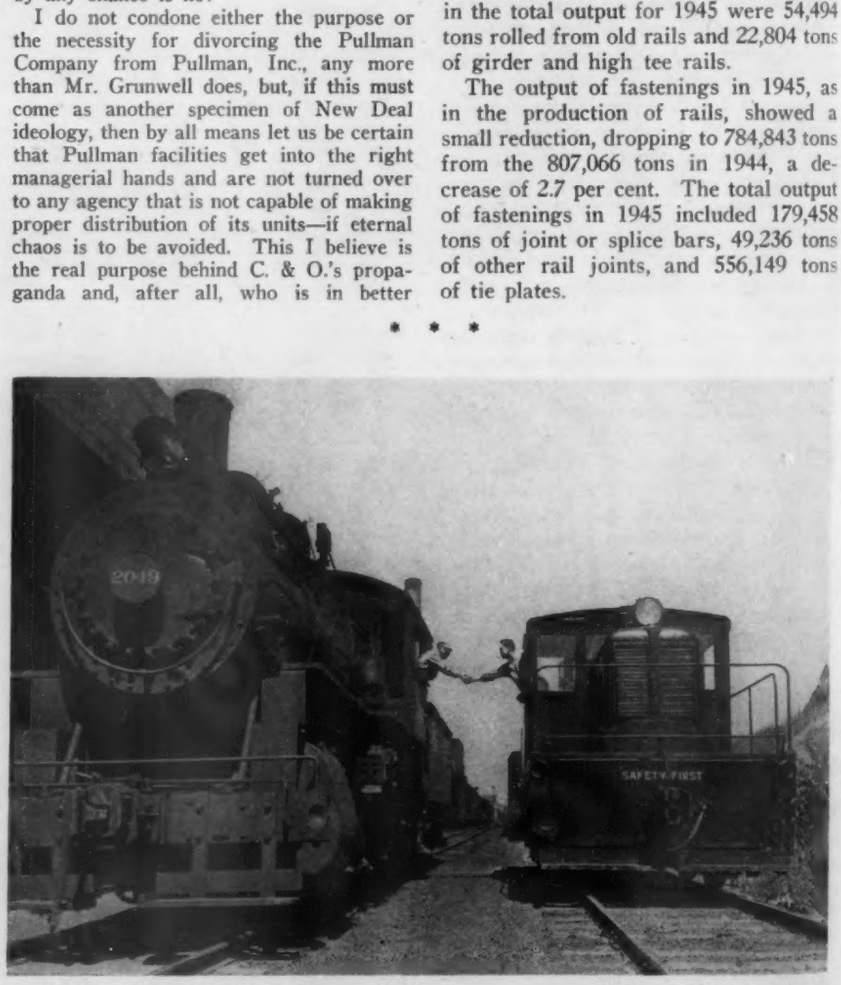
(*Continued from page 603*)

per cent; and in the group weighing 60 lb. or less, a drop from 162,942 tons to 150,724 tons, or 7.5 per cent.

Of the total tonnage of rails produced in 1945, 2,350,686 tons, or 97.2 per cent, were rolled from open-hearth steel. This percentage is the same as for the preceding year. Only 5,835 tons of rails were rolled from Bessemer and electric steels in 1945, a drop of 59.1 per cent compared with the 14,261 tons rolled from these steels in 1944, making this the second successive year in which the tonnage in this category showed a decrease from the preceding year, in contrast to the tendency to increase that prevailed prior to 1944. Also included in the total output for 1945 were 54,494 tons rolled from old rails and 22,804 tons of girder and high tee rails.

The output of fastenings in 1945, as in the production of rails, showed a small reduction, dropping to 784,843 tons from the 807,066 tons in 1944, a decrease of 2.7 per cent. The total output of fastenings in 1945 included 179,458 tons of joint or splice bars, 49,236 tons of other rail joints, and 556,149 tons of tie plates.

* * *



Hail and Farewell—A steam locomotive in service at the plant of the W. F. Hall Printing Company, Chicago, is replaced by a 50-ton Whitcomb Diesel-electric

GENERAL NEWS

Railroad Rate Bureaus Can Stay in Business

Assurances given by attorney general will permit them to carry on

Conversations which J. Carter Fort, vice-president and general counsel of the Association of American Railroads, has had with Attorney General Clark and other Department of Justice officials have resulted in what Mr. Fort regards as satisfactory assurances that the railroads "may continue the normal and customary rate bureau and rate conference practices while the Georgia anti-trust suit is pending, without fear of additional suits by the government based upon such practices during such period." The conversations followed Civilian Production Administrator Small's recent decision to permit the expiration on October 1 of Certificate No. 44 which had given the rate bureaus and other joint-action arrangements wartime immunity from the anti-trust laws.

"Satisfactory Assurances"—Mr. Fort advised general counsel of A. A. R. member roads of the situation in an October 7 letter which noted that Justice Department officials participating in the conversations included Assistant Attorney General Berge, who is in charge of the Anti-Trust Division. The letter was as follows:

"As you are no doubt advised, Certificate 44 of the chairman of the War Production Board ceased to be effective on October 1, 1946. The Office of Defense Transportation and other government agencies, together with this Association, endeavored to obtain an extension of the certificate, but such extension was refused upon representations by the Department of Justice.

"Enclosed is a copy of a letter of September 27, addressed to Col. J. M. Johnson, director of the O. D. T., by Mr. J. D. Small, administrator, Civilian Production Administration (successor to the chairman of the War Production Board) advising of his decision to permit the certificate to lapse. [See *Railway Age* of October 5, page 579.]

"During the past few days I have had conversations with Mr. Tom C. Clark, the attorney general of the United States, and other officials of the Department of Justice, including Mr. Wendell Berge and Mr. J. E. Kilday, concerning the situation which has arisen by reason of the withdrawal of Certificate 44. As a result of these conversations I have received assurances which are satisfactory to me that the railroads may continue the normal and customary rate bureau and rate conference practices while the Georgia anti-trust suit is pending, without fear of additional suits by the government based upon such practices during that period. The view of the department is that any additional suit, civil or criminal, involving practices of the character above described, would serve no proper purpose and would be without justification.

"The course to be followed by the Department of Justice after decision in the Georgia case must remain for consideration until that decision has been rendered and must depend on the nature of the decision. If for any reason the Georgia case does not throw sufficient light upon the subject of rate conferences, the department may find it desirable to delay final determination of its policy until the Lincoln anti-trust case has been decided.

Watchful Waiting—"The attitude of the department, as expressed above, is not to be regarded as indicating a conclusion on its part that the customary and normal functioning and practices of rate conferences and bureaus involves no infraction of the anti-trust laws, but only as reflecting the view that, pending the outcome of the Georgia case, such functioning and practices should not be disturbed by additional law suits, and the further view that no additional suit should be undertaken by the government even subsequent to the decision in the Georgia case, based upon normal activities engaged in by rate conferences pending such decision."

The foregoing would seem to give broader clearance than did Certificate 44 in that it makes no reference to operating the bureaus under rules prescribed by the Interstate Commerce Commission. The certificate required adherents to such rules as the commission might prescribe. Moreover the immunity will continue without recurring deadline dates until the issues have been determined in the courts. Upon inquiry, Director Johnson of the O. D. T. stated on October 9 that he had up to that time received no communication on the matter from the Department of Justice. It is understood that the O. D. T. director, who had been insistent that Certificate 44 be extended, relaxed his opposition to the expiration only when he became confident that some such assurances as those obtained by Mr. Fort would be forthcoming from the Department of Justice.

8 Months Net Income Totaled $55,400,000

Net railway operating income for the same period was $298,401,456

Class I railroads in the first eight months of this year had an estimated net income, after interest and rentals, of $55,400,000, as compared with $443,932,588 in the corresponding period of 1945, according to the Bureau of Railway Economics of the Association of American Railroads. The eight-months net railway operating income, before interest and rentals, was $298,401,456, compared with $735,012,867 in the same period last year.

August's estimated results showed a net income of $51,000,000, compared with $51,151,731 in August, 1945, while the net railway operating income for that month was $81,693,252, compared with August, 1945's $87,496,883. In the 12 months ended with August, the rate of return averaged 1.51 per cent, compared with 3.9 per cent for the 12 months ended with August 31, 1945.

The A. A. R. statement pointed out that certain railroads took into their accounts in August, as a credit to income, carrybacks from 1944 and 1945 Federal taxes authorized by the Internal Revenue Code. Net income for August without these credits was approximately $44,360,000 instead of the $51,000,000 with them. For the eight months ended August 31, without carryback credits, the railroads suffered a deficit in net income of approximately $4,900,000, as against the net income of $55,400,000 with thtese deductions from federal tax accruals.

Gross a Fifth Less—Gross in the eight months totaled $4,961,571,872 compared with $6,247,876,581 in the same period of 1945, a decrease of 20.6 per cent. Operating expenses amounted to $4,183,419,346 compared with $4,290,477,203, a decrease of 2.5 per cent.

Fifty-six Class I roads failed to earn interest and rentals in the eight months, of which 25 were in the Eastern district,

CLASS I RAILROADS—UNITED STATES

	1946	1945
Month of August		
Total operating revenues	$ 710,224,105	$ 754,855,456
Total operating expenses	555,892,389	547,059,519
Operating ratio—per cent	78.27	72.47
Taxes	58,334,295	105,832,320
Net railway operating income (Earnings before charges)	81,693,252	87,496,883
Net income, after charges (estimated)	51,000,000	51,151,731
Eight Months Ended August 31, 1946		
Total operating revenues	$4,961,571,872	$6,247,876,581
Total operating expenses	4,183,419,346	4,290,477,203
Operating ratio—per cent	84.32	68.67
Taxes	380,488,367	1,099,228,647
Net railway operating income (Earnings before charges)	298,401,456	735,012,867
Net income, after charges (estimated)	55,400,000	443,932,588

11 in the Southern region and 20 in the Western district.

Class I roads in the Eastern district in the eight months had an estimated deficit of $22,300,000 compared with a net income of $176,505,639 in the same period of 1945. For August, their estimated net income was $22,400,000 compared with $18,949,419 in August, 1945. The eight-months net railway operating income in the Eastern district was $86,888,750 compared with $311,072,295 in the same period of 1945; for August it was $36,797,284, compared with $34,563,519 in August, 1945.

Gross in the Eastern district in the eight months totaled $2,199,640,811, a decrease of 16.7 per cent compared with the same period of 1945, while operating expenses totaled $1,912,860,274, or a decrease of 1.8 per cent.

Class I roads in the Southern region in the eight months had an estimated net income of $5,700,000 compared with $59,523,685 in the same period of 1945. For August, they had an estimated net income of $3,600,000 compared with $4,552,637 in August, 1945. Those same roads in the eight months had a net railway operating income of $45,463,477 compared with $101,690,233 in the same period of 1945. Their August net railway operating income amounted to $7,502,035 compared with $10,197,284 in August, 1945.

Operating revenues in the Southern region in the eight months totaled $700,166,922, a decrease of 19.7 per cent compared with the same period of 1945, while operating expenses totatled $587,026,816, an increase of 1.6 per cent.

In the West—Class I roads in the Western district in the eight months had an estimated net income of $72,000,000 compared with $207,903,264 in the same period of 1945. For August, they had an estimated net income of $25,000,000 compared with $27,649,675 in August, 1945. Those same roads in the eight months had a net railway operating income of $166,049,229 compared with $322,250,339 in the same period of 1945. Their net railway operating income in August amounted to $37,393,933 compared with $42,736,080 in August, 1945.

Gross in the Western district in the eight months totaled $2,061,764,139, a decrease of 24.6 per cent compared with the same period of 1945, while operating expenses totatled $1,683,532,256, a decrease of 4.6 per cent.

Shippers Told Why Not Enough Box Cars Are Available

Continued strikes in the face of bumper crops, large government export programs and an increase in less-than-carload shipments are factors contributing to the shortage of box cars, R. E. Clark, manager, closed car section, Car Service Division of the Association of American Railroads, told the Mid-West Shippers' Advisory Board at its meeting on October 3 and 4, at the Palmer House in Chicago.

Mr. Clark said that the railroads have kept pace with industry in converting from war-time to peace-time, and that the national transportation situation in respect to service is much improved over a few months ago, but added that it's "not what we'd like it to be." The speaker quoted figures showing that the railroads are operating with fewer boxcars than a year ago, and pointed out that the shortage has been made less acute by faster turn-around time, improvement in car miles per day and shorter hauls.

Freight Car Loadings

Loadings of revenue freight for the week ended October 5 totaled 906,848 cars, the Association of American Railroads announced on October 10. This was a decrease of 9,635 cars, or 1.1 per cent, below the preceding week, an increase of 138,808 cars, or 18.1 per cent, above the corresponding week last year, and an increase of 29,813 cars, or 3.4 per cent, above the comparable 1944 week.

Loading of revenue freight for the week ended September 28 totaled 916,483 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, September 28

District	1946	1945	1944
Eastern	174,822	149,425	167,976
Allegheny	194,752	174,226	199,413
Pocahontas	66,873	56,961	56,991
Southern	131,957	118,860	124,733
Northwestern	143,465	137,766	144,270
Central Western	141,575	133,894	145,638
Southwestern	63,039	61,377	73,606
Total Western Districts	348,079	333,037	363,514
Total All Roads	916,483	832,509	912,627
Commodities:			
Grain and grain products	49,036	53,941	50,012
Livestock	20,827	23,333	22,927
Coal	193,810	165,330	179,869
Coke	13,903	11,493	14,205
Forest products	48,934	37,706	44,858
Ore	66,179	63,386	73,419
Merchandise l.c.l.	125,645	110,543	109,921
Miscellaneous	398,149	361,777	417,416
September 28	916,483	832,509	912,627
September 21	899,053	837,293	897,883
September 14	907,169	856,101	891,486
September 7	794,483	729,854	825,166
August 31	908,440	860,342	897,603
Cumulative total, 39 weeks	30,418,597	32,014,099	32,746,065

In Canada.—Car loadings for the week ended September 28 totaled 79,679 cars as compared with 73,921 cars for the corresponding week last year, according to the compilation by the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
September 28, 1946	79,679	36,210
September 29, 1945	73,921	32,066
Cumulative Totals for Canada:		
September 28, 1946	2,672,964	1,327,706
September 29, 1945	2,690,323	1,390,517

Program of National Shippers Boards Meeting

The transportation outlook for the railroads and the shippers in the months immediately ahead will be the major topic for discussion at the tenth annual meeting of the National Association of Shippers Advisory Boards at the Jefferson Hotel in St. Louis, Mo., on October 22. As reported in *Railway Age* of October 5, page 573, John J. Pelley, president of the Association of American Railroads, will be the principal speaker. He will address a luncheon sponsored by the shipper organization, the Traffic Club of St. Louis, the Junior Traffic Club of Metropolitan St. Louis and the Women's Traffic Club of Metropolitan St. Louis.

Speakers at the business sessions of the National Association will be Col. J. Monroe Johnson, director of the Office of Defense Transportation; J. Carter Fort, vice-president and general counsel of the A. A. R.; Warren C. Kendall, chairman of the Car Service Division of the A. A. R.; Carl Giessow, director of the Traffic Bureau of the St. Louis Chamber of Commerce; Charles H. Vayo, of Rochester, N. Y., general traffic manager of the Eastman Kodak Company, and J. E. Bryan, of Chicago, general traffic manager of the Wisconsin Pulp and Paper Manufacturers Traffic Association.

Other business of the meeting will include election of officers, adoption of resolutions, and a report by Warren B. Shepherd, secretary of the shipper association and assistant general traffic manager of the Aluminum Company of America. Clare J. Goodyear, of Philadelphia, president of the association and traffic manager of the Philadelphia & Reading Coal and Iron Company, will preside.

New York Truck Strike Still Ties Up Freight

Further interference with the movement of freight by rail in and out of New York, where a strike of local truck drivers still remains partially effective, has been caused, it is reported, by picketing of piers and terminals of the Pennsylvania, allegedly due to the refusal of a trucking company which handles pick-up and delivery business for that railroad to accept terms on which the union and some operators have agreed. Union truck drivers whose employers have agreed to pay the increase are said to be refusing to cross these picket lines.

Truckers Again Attack RR Rates for L. C. L. and P. & D.

Action of the Interstate Commerce Commission with regard to increased charges for both pickup and delivery and line haul of railroad less-carload shipments "will largely control the further welfare and development of the trucking industry." So spoke Chester Moore, secretary, American Trucking Associations, and chairman of its special committee on the I. C. C.'s general class rate and classification investigation at the 13th annual convention of A. T. A. in Chicago on October 5 to 9. He added his opinion that the railroads take unfair advantage by rendering p. & d. service at an actual loss "simply because the losses are subsidized by revenues from other freight which is not competitive with the trucking industry."

Mr. Moore declared that, by maintaining alleged below-cost rates on l.c.l. traffic, the railroads are diverting freight from the trucks, while at the same time they are increasing their own losses by handling such small shipments. This condition, he asserted, makes it necessary for the railroads to

further increase their rates on non-competitive freight. Said Mr. Moore: "The railroads should not be permitted to continue their practice of rendering service on l.c.l. freight at a loss simply because they wish to ruin a competitive transportation industry."

Sympathy with the additional burdens placed upon the railroads by the recent "Crosser" amendments to the Railroad Retirement and Unemployment Insurance Acts was expressed in the report of J. V. Lawrence, managing director, A. T. A., to the board of directors. While the trucking industry was successful in defeating the proposed extended coverage of the acts to portions of the trucking industry performing p. & d. service for the railroads or for forwarders, "as good citizens and as business men we must look with dismay upon passage of this bill even with the extended coverage deleted," said Mr. Lawrence. The basis for this alarm may be found in the fact that the new amendments place a premium on idleness and, being intended for a separate class of people, will soon bring clamor for similar benefits for employees now under Social Security.

Mr. Lawrence reviewed the legislative achievements of A. T. A. with considerable pride. He attributed the record of the trucking industry in this endeavor not to "smart maneuvers by anyone in the Washington office" but to "cohesive effort by a large number of members of the industry." He claimed that individual truck owners "by letter, by wire, by personal interview" told their congressmen their views "asking for fair play and things that were in the public interest."

American University Will Offer Highway Transport Course

American University, Washington, D. C., will conduct during November a "highway transportation institute" under the direction of its professor of transportation, Dr. L. M. Homberger. The intensive 30-day course will be the third in a series of which the first was the "rail transportation institute" of last March and the second is the "foreign transportation institute" which started September 24.

The highway institute, the announcement said, has been organized in cooperation with the Public Roads Administration, Office of Domestic Commerce of the Department of Commerce, American Association of State Highway Officials, American Association of Motor Vehicle Administrators, American Trucking Associations, National Associations of Motor Bus Operators, National Council of Private Truck Owners, American Automobile Association, National Highway Users Conference, and Automotive Safety Foundation.

The course, which will run from November 1 through November 30, is designed "for present and prospective junior executives of government and private agencies engaged in highway and motor vehicle administration, in motor transportation, and in automotive and construction equipment manufacturing industries." In addition to its coverage of various aspects of motor transportation, the program calls for lectures on "other modes of transportation," in which connection Dr. Julius H. Parmelee, director of the Bureau of Railway Economics, Association of American Railroads, will discuss rail transport.

Classroom work will be supplemented by field studies of motor transportattion and highway facilities, and by a series of supper meetings at which addresses will be made by H. S. Fairbank, deputy commissioner, Public Roads Administration; Arthur C. Butler, director, National Highway Users Conference; A. W. Koehler, secretary-manager, National Association of Motor Bus Operators; Pyke Johnson, president, Automotive Safety Foundation, and Ted V. Rodgers, president, American Trucking Associations.

Tuition for the institute will be $125, and the announcement stated that veterans may participate under the so-called GI bill of rights. The announcement also noted that students may be selected by their companies, or may apply for admission by submitting information about their educational background or their practical experience. No specific previous education is required. Applications for admission should be made to Dr. Homberger, American University, 1901 F street, N. W., Washington 6, D. C. The last registration day will be October 21.

New York Central Gets Its First Budd Car

The New York Central this week took delivery of the first of 60 stainless steel, de luxe coaches ordered from the Budd Company. The remaining 59 are expected to be delivered during the fall. The 60 coaches, each of which will seat 56 passengers, supplement the 153 new coaches of high tensile alloy steel, with stainless steel sheathing, which recently were delivered to the railroad by the Pullman-Standard Car Manufacturing Company, and are part of the road's $22,000,000 order placed with Budd for 60 stainless steel coaches, 39 dining cars, 89 combination sleeping cars, 26 lounge combinations and 25 other cars of various types.

Refrigerator Cars Undergoing Cross-Country Experiment

Six refrigerator cars of new design, each loaded with frozen foods, are being used as a moving laboratory as they roll across the country under the careful scrutiny of a corps of research engineers in connection with a series of tests which railroad and government representatives are making in order to determine what further improvements can be made in the present method of insulating such cars so that the best types of equipment for general service can be provided.

According to the Refrigerator Car Research Bureau of the Association of American Railroads, which is sponsoring the experiment together with the Department of Agriculture and the National Bureau of Standards, the series of tests will be the most complete ever to be conducted under actual operating conditions and promises to be of great value to refrigerator car owners and perishable shippers.

The cars were built by the American Refrigerator Transit Company, St. Louis, Mo., and contain various amounts of insulation ranging from three to seven inches in thickness. Two of the cars have reflective insulating material incorporated. The cars were loaded with frozen foods at Hillsboro, Ore., on October 2 and then were moved to Cincinnati, Ohio, the route being Southern Pacific, Union Pacific, Chicago & North Western, Indiana Harbor Belt and Pennsylvania.

In building these refrigerator cars, thermo-couples were placed in the walls, floor and ceiling, from the exterior of each car to the interior at strategic points so that the transmission of heat might be recorded from origin to destination. The K values (heat transmission flow) of the insulation used will be determined through the hot plate method and will serve as a heat flow meter, which, together with the temperatures recorded on the test trip, will make it possible accurately to compute the transmission of heat through the car superstructures.

As a balance against these computations, an accurate measurement of the refrigeration input into each car will be determined through careful weights of ice and salt used. This information, together with the specific heats of structural materials in the car, as well as the loading, will give a check against the heat flow computations.

A business car will be operated adjacent to the six test cars, the observation end being equipped with instruments connected by cables to the test cars. This arrangement will permit the reading of the instruments while the train is rolling, as well as when standing still at division points. A Brown electronic precision-indicating pyrometer will be used, together with a key switch cabinet with 120 switch points.

Plans were made to install electric hygrometers in the walls, floor, and ceiling of the car superstructures so that the transmission of moisture could be determined. However, due to construction of this equipment being entirely new and the materials not available, this phase of the investigation had to be postponed.

The use of this refrigerator car test equipment during the cooling off period after cars are iced, during the loading period at Hillsboro, and during the trip from Hillsboro to Cincinnati, will give the investigators a basis on which to evaluate the different types and thicknesses of insulation used.

The Distaff Side Concentrates on Service and Public Relations

Meeting in annual session in Chicago on October 3 and 4, some 35 members and guests of the two-year-old National Association of Railroad Women centered their attention on the fields in railroading in which women have come to the forefront during recent years—namely, public relations, personnel policies and passenger "service" improvements. Harold Sims, director of public relations, Western Association of Railway Executives, discussed pending transportation legislation in an off-the-record talk to the ladies.

George Kelly, executive vice-president of the Pullman Company, traced the evolu-

tion of business enterprise through the periods of protectionism and the guilds, unfettered competition and, finally, the present-day growth of public control, stressing that the latter will be good or bad in relation to the public's opinion of business. The "one big task" of railroad supervisory personnel he saw as "the telling of the facts to the many-sided public."

Frederick H. Judd, assistant engineer, Grand Central Terminal, New York Central, described the operations of that passenger terminal, with particular emphasis on proved methods of handling large crowds expeditiously. The railroad women showed particular interest in the supervision of "red cap" services, which gave rise to a lively discussion regarding methods of obtaining personnel for rush periods.

Mrs. Kathryn Bargelt, special representative, telephone and telegraph department, New York Central, presented a talk titled "What Railroads Are Doing to Place Themselves Before the Public," in which she described the program for bettering telephone conversation "manners" currently in progress on her road, as described in the *Railway* Age of September 7, page 410. Other speakers from outside the industry touched upon labor relations —particularly female personnel—and modern trends in the preparation of food.

The National Association of Railroad Women was organized in 1944 to serve those women in the industry holding supervisory or executive positions and to whom the exigencies of war-time traffic and employment had brought difficult problems. Officers for the coming year are: general chairman, Velma McPeek, supervisor of passenger train service, Chicago, Burlington & Quincy, Chicago; vice-chairman, Wanda L. Myers, assistant to general passenger traffic manager, Southern, Washington, D. C.; secretary, Margaret Springer, director of hostess service, Southern, Washington, D. C., and treasurer, Isabel Masters, special investigator, office of vice-president, New York Central, Chicago. Helen Foreman, supervisor of women personnel, Baltimore & Ohio, Baltimore, Md., is chairman of the membership committee.

School Children to Name New England Roads' New Cars

School children of the four northern New England states are to have an opportunity of choosing names for the new coaches and restaurant-lounge cars due to be delivered early next year to the Boston & Maine and Maine Central, those railroads have announced.

The winners in the competition to choose the names of the 24 cars will also have their own names and home addresses affixed on permanent name plates to be carried on the sides of the new cars. The competition, starting October 15 and closing November 10, will be open to all public and parochial school pupils in the grammar grades. Winners of the competition will be guests of the railroads at award ceremonies in Portland, Me., and in Boston and two of the winners will make a trip to Worcester, Mass., to christen the new cars at the plant of the Pullman-Standard Car Company, where they are now being built.

A. A. R.'s Pelley Pays Tribute to George Westinghouse

Paying a railroad-industry tribute to George Westinghouse, inventor of the air brake, J. J. Pelley, president of the Association of American Railroads, last week laid a wreath upon the bust of Mr. Westinghouse at the permanent air-brake exhibit in the Smithsonian Institute, Washington, D. C. The ceremony was in connection with the hundredth anniversary of Mr. Westinghouse's birth on October 6, 1846.

"Railroad transportation, not alone in this country, but throughout the world, was revolutionized by the inventive genius of George Westinghouse and his air brake," Mr. Pelley said in part. "The hundreds of thousands of men and women who work on the nation's railroads, and the hundreds of millions who are transported yearly, owe a debt of gratitude to Mr. Westinghouse which today we have humbly tried to express by paying tribute on the centennial anniversary of his birth. This exhibit, placed here in 1941, accords to Mr. Westinghouse the recognition by science of the measure of the worth of his invention."

In a statement issued in connection with the ceremony, George A. Blackmore, chairman of the board and chief executive officer of the Westinghouse Air Brake Company, said in part: "Mr. Westinghouse conceived the air brake 78 years ago for the purpose of making rail transportation safer. He had been appalled when he witnessed two freight trains crash into each other in broad daylight on a smooth level, straight stretch of track, despite efforts of the trainmen to halt them by applying hand brakes.

"He tried and discarded steam and electricity as power sources for his brake. A chance reading of a magazine article, describing how engineers in Italy made use of compressed air to actuate drills, gave him his inspiration. He compressed air, and applied it as the motive power for his brake. From the day of its initial demonstration on a railroad train a new impetus was given to railroading, and gainful employment was created for hundreds of thousands in both industry and agriculture, not only in this country but abroad."

Martin W. Clement Honored

The Vermilye Medal of the Franklin Institute, Philadelphia, Pa., was awarded to Martin W. Clement, president of the Pennsylvania, at a dinner meeting in Franklin Hall on October 4, for "conspicuous accomplishments . . . at a time when the organization and facilities under his administration were taxed to the utmost by the war burden." The Vermilye Medal is in recognition of outstanding contributions in the field of industrial management and its previous recipients have been Lewis H. Brown, president of the Johns-Manville Corporation, William S. Knudsen, director general of the Office of Production Management, and Walter S. Gifford, president of the American Telephone & Telegraph Co.

In responding President Clement pointed out that "the story of the railroads in this war is a story of organization and preparedness, and the rail transportation of this war had its beginning in the last war." He reviewed the preparations that were made since the First World War and then discussed some of the outstanding

J. J. Pelley, president of the Association of American Railroads, places wreath before the George Westinghouse bust at the permanent exhibit of the air brake in the Smithsonian Institution, Washington, D. C.

factors which were responsible for the remarkable accomplishments of the railroads during the recent war. "The great problem of the railroads," said President Clement, "was to change themselves from carriers serving a limited section of the country, to a coordinated unit, serving the freight needs of the whole nation and the tremendous need for passenger transportation caused by the great pyramiding of the armed forces."

In concluding his address Mr. Clement said: "As one transportation service after another faltered or discontinued, the railroads were called to carry on. . . . When one compares this war with the previous war, with private ownership and operation versus government operation, it is found that in the government control and guaranty period of the previous war and the subsequent inflation period, freight rates were increased almost 100 per cent and passenger fares were increased almost 50 per cent. In this war, when the railroads ended up they were moving freight at the same rates as were in effect before the war, and passenger fares in part had been increased only ten per cent, but mnch of the volume had moved at greatly reduced rates, particularly for troops on furlough, who moved on about half the regular coach fare. Railroads performed their war service without any increase in cost to the public, without any increase in cost to the country, and without any interruption in meeting the needs of the country. That at least is some measure of the war job done by the railroads of America."

Lehigh Valley Modernizing Coaches

The Lehigh Valley has begun work on the modernization of its passenger coaches at the Sayre, Pa., shops. The coaches, each of which seats 76 persons, will have streamlined exteriors and will be finished in Tuscan red. They are to be mechanically air-conditioned and equipped with new seating arrangements, each seat being provided with individual lighting and having foam rubber cushions covered with mohair plush. New double windows are to be of shatterproof glass and Hunter's dehydrated sash will be used to prevent the accumulation of moisture between the windows. The men's smoking compartment will be equipped with wash basins and a Pullman-style lavatory. The ladies' powder room will be similarly outfitted.

C. & O.'s 1945 Annual Report Wins Top Honors

At a banquet October 4 at the Waldorf-Astoria hotel, New York, the Chesapeake & Ohio received the award of the Financial World for the best 1945 annual report of all industry in a survey of such publications made by that magazine. A gold "Oscar" was presented to the C. & O.'s chairman, Robert R. Young, to mark this occasion. The road also received a silver "Oscar" for the best report in the transportation industry and a bronze award for the best report among eastern railroads.

The second award in the transportation industry classification went to the Missouri-Kansas-Texas, and the third to Pan American Airways. The M.-K.-T. report was put in first place in the southwestern railroad grouping, while the Great Northern's was rated first in the northwestern section. Awards also were made for annual report advertisements. In the railroad category the C. & O. again was placed first, with the M.-K.-T. second, the Pere Marquette third and the Pennsylvania fourth.

Young's Program—The principal address at the dinner was made by Secretary of the Treasury Snyder, who outlined government fiscal policies. In accepting the gold "Oscar," Mr. Young developed the argument that there is need for a "truth in politics" act to match, clause for clause, the "truth in securities" act under which "Wall Street" operates.

"The standards for measuring the honesty of our public servants, who ask us that we trust them with our liberties and our life, certainly cannot be lower," he said, "than those they themselves have laid down for the custodians of merely our money. Labor, farmer and capital must take time out from form-filling, and the time-consuming annoyances of Washington-created scarcities, to insist upon accountings and explanations for the wastes and confusions of Washington."

In developing the parallel between a "truth in politics" law and the legislation affecting securities, the C. & O. chairman emphasized these points:

"(1) If my annual reports and proxies were filled with broken promises and half truths, the truth in securities act would have got me if the common law had not.

"(2) The sources of income of every public servant would make as interesting reading as do those of officers and directors.

"(3) Is it any less a crime for a public bureau or commission to divert the substance of Peter to buy the vote of Paul than it is for some Kruger to convert the assets of a publicly-held corporation to personal use?

"(4) To pretend to seek price stability while quietly encouraging wage increases is, to say the least, not being frank.

"(5) Taxation should be *direct* where the underprivileged can have a look at it. To cause them to believe that only the rich bear these price spiraling burdens is to deceive them."

Club Meetings

The New York Railroad Club will meet at the Engineering Societies Auditorium, New York, on October 17, at 8 p.m. James E. Davenport, vice-president, engineering, American Locomotive Company, will discuss steam, Diesel, and gas turbine engines and their applications to European transportation.

A meeting of the Fire Protection and Insurance section of the Association of American Railroads will be held at the Hotel Sherman, Chicago, on October 22 and 23.

A meeting of the Railroadians of America will be held at 7:30 p. m., on Friday, October 18, in the auditorium of the Pennsylvania Railroad Y. M. C. A., Pennsylvania Station, N. Y. John W. Barriger, recently-elected president of the Monon, is scheduled to speak to the group on Super Railroading on the Monon.

Navy Awards for Railroads

In recognition of the transportation job which the railroads did during the war and during the demobilization period in moving millions of naval personnel, approximately 40 railroads and the heads of the four regional railroad passenger associations will receive the highest award that the Bureau of Naval Personnel of the Navy Department can give to an individual organization not affiliated with the Navy. The awards will be presented at a luncheon at the Chicago Club in Chicago on October 18.

Certificates of Achievement will be awarded the railroads, and Certificates of Appreciation will be given the passenger association heads. Admiral Louis Denfeld, chief of naval personnel, who will assume command of the Pacific fleet next January, will make the presentations. Other high-ranking Navy, government and railroad officials who will appear on the program are Under Secretary of the Navy John L. Sullivan; Rear Admiral J. L. Holloway, Jr., assistant chief of naval personnel and recently appointed superintendent of the United States Naval Academy at Annapolis; Colonel J. Monroe Johnson, director of the Office of Defense Transportation, and John J. Pelley, president of the Association of American Railroads. Hugh W. Siddall, chairman of the Interterritorial Military Committee, will act as toastmaster.

The presentation ceremony will be broadcast by the Mutual Broadcasting System. Certificates of Achievement will be awarded to the Pullman Company and the following railroads:

Alton
Atchison, Topeka & Santa Fe
Atlantic Coast Line
Baltimore & Ohio
Boston & Maine
Chesapeake & Ohio
Chicago & North Western
Chicago, Burlington & Quincy
Chicago, Milwaukee, St. Paul & Pacific
Chicago North Shore & Milwaukee
Chicago, Rock Island & Pacific
Delaware, Lackawanna & Western
Denver & Rio Grande Western
Erie
Florida East Coast
Great Northern
Illinois Central
Lehigh Valley
Louisville & Nashville
Missouri-Kansas-Texas
Missouri Pacific
New York Central
New York, New Haven & Hartford
Norfolk & Western
Norfolk Southern
Northern Pacific
Pennsylvania
Pere Marquette
Reading
Richmond, Fredericksburg & Potomac
St. Louis-San Francisco
Seaboard Air Line
Southern Pacific
Southern
Texas & Pacific
Union Pacific
Wabash
Western Pacific

Certificates of Appreciation will be awarded the following:

H. W. Siddall, chairman, Interterritorial Military Committee.

A. B. Chown, chairman, Trunk Line-Central Passenger Association.

W. H. Clifford, secretary, New England passenger Association.

M. B. Duggan, chairman, Southern Passenger Association.

Lists of meetings and conventions and of current publications appear on pages 629 and 631, respectively.

With the Government Agencies

Federal Barge Lines Lost $845,234 in '45

Adverse results turn surplus accounts balance into red figure of $55,378

The government-owned Inland Waterways Corporation reported a consolidated net deficit of $845,234 for 1945, according to the annual report made public this week by the Department of Commerce. This compared with the 1944 deficit of $385,545, and it more than wiped out the credit balance in the corporation's surplus account, leaving there a red figure of $55,378.

The report, dated June 15, was submitted to former Secretary of Commerce Wallace by Guy Bartley, I. W. C. secretary-treasurer, who was acting president for about six months prior to the recent appointment of Albert C. Ingersoll, Jr., to the presidency.

Last year's operating deficit was $872,969, but this was reduced to the reported net deficit by other income, including interest income of $92,363. The operating deficit in 1944 was $463,446. Wage increases and changes in working rules increased payroll costs by $300,000 during 1945. Mr. Bartley reported that I. W. C. now has collective bargaining agreements with national labor organization covering approximately 85 per cent of its employees. During the year, he said, "labor relations, generally speaking, were satisfactory and negotiations have been carried on in a cooperative manner."

"Savings" Estimated — The report makes the usual claim of "savings to the public" as a result of I. W. C. operations. "It is important to note," it said, "that the establishment of water borne commerce on the inland rivers of the United States has resulted in large savings to the public. The difference between freight charges paid on traffic routed via the corporation and the charges that would have been paid had the traffic moved all-rail amounted to $1,527,750 for the year 1945, and for the period June 1, 1924, to December 31, 1945, aggregated $44,292,750. Additional large savings to the public have, of course, resulted from the operation of privately owned carriers."

Operating revenues in 1945 totaled $7,935,251, compared to $8,692,687 in 1944; while operating expenses were $8,808,220, compared to $9,156,133. As Mr. Bartley calculated it, the over-all "shrinkage" of $459,689 in the net results as compared with 1944 was due to the decrease of $655,762 in revenues and other income which was only partially offset by the drop of $196,074 in expenses and income deductions. Total revenue freight transported in the corporation's own barges in 1945 amounted to 1,889,259 tons, compared with 2,084,156 tons in 1944. In addition, the corporation handled for the account of others, including other carriers, 402,857 tons last year as compared with 404,093 tons in 1944.

The accompanying report of the secretary-treasurer includes the customary listing of expenses, not included in the accounts, which I. W. C. would have had to pay if it were privately owned. The list includes: Personal injury claims of employees paid by U. S. Employees Compensation Commission, $10,869; postage, $17,500; difference between commercial and government rates on telegrams, $1,355. It is also conceded that some taxes would have to be paid on terminal properties, but "information received from reliable sources indicates that privately owned carriers operating on the inland waterways . . . are not subject to tax on their floating equipment." And "approximately 86 per cent of the corporation's total investment in water line facilities consists of floating equipment."

W. A. A. Adopts Freight Car Conservation Program

The War Assets Administration, "with billions of dollars worth of war surplus property requiring shipment in the face of a nationwide shortage of railroad freight cars, has adopted a rigid program of freight car conservation to lighten the impact on rail facilities as much as possible." This was announced by the disposal agency in an October 7 press release which went on to say thtat "W. A. A.'s record in stretching the use of freight cars has won the commendation of the Association of American Railroads."

The announcement further reported that G. S. Devol, W. A. A. director of traffic, had said that the agency "is shooting at still greater efficiency with the cooperation of the A. A. R. and the Office of Defense Transportation." W. A. A. shipments, it was explained, move in "huge volumes" into and out of a "network of nearly 200 disposal centers and warehouses and hundreds of sales sites in every part of the country." And its "stiff regulations to guide its agents in efficient use of freight cars" have resulted "in a steady seven-months decrease in the average length of time cars were held for unloading in disposal centers."

With "thousands of cars" to be used in the next few months, Traffic Director Devol has called upon the entire W. A. A. organization "to cooperate by: (1) Unloading cars promptly after arrival, and releasing them; (2) not ordering more cars for loading than are needed; (3) timing orders for cars to coincide with ability to load promptly; (4) loading cars promptly and notifying carriers as soon as cars are ready for movement; (5) avoiding delays in movement of loaded cars awaiting execution of bills of lading."

Commodity Statistics Revised by the I.C.C.

Order, effective January 1, increases number of classes from 157 to 262

Making the first general revision since 1927 in its requirements for the reporting of freight commodity statistics, the Interstate Commerce Commission last week made public a September 24 order prescribing, as of next January 1, the new set-up which was developed by its Bureau of Transport Economics and Statistics in cooperation with committees of railroad accounting and traffic officers, and representatives of interested government agencies. The principal feature of the revision is the increase from 157 to 262 in the number of reporting classes, most of such expansion resulting from the breakdown of old Class 701, Manufacturers and Miscellaneous, N. O. S.

The commission's action requires a revision of the 1928 edition of the former Railway Accounting Officers Association Freight Commodity Classification, which publishes for the guidance of railroads a classification of various articles assigned to the prescribed reporting classes. The revised classification will be called the "A. A. R. Freight Commodity Classification, 1947 Edition," and it is expected to be ready for mailing about December 1. Orders should be placed with E. R. Ford, secretary of the Accounting Division, A. A. R., Transportation Building, Washington 6, D. C., the price being 75 cents per copy when ordered in quantities of less than 10, and 50 cents per copy on large orders.

Back to Quarterly Basis—Aside from the increase in the number of reporting classes, the commission's order will return the reporting of commodity statistics to a quarterly basis with the usual annual summary at the close of each year. Originally the data were compiled quarterly, but monthly reporting was begun in October, 1942, at the request of the Office of Defense Transportation. The quarterly-reporting requirement applies to Class I roads, which must also continue making a separate report by geographical areas, the latter, too, becoming a quarterly instead of a monthly return. Meanwhile, Class II and III carriers will be required to make only annual reports according to the commodity groups; and they will be relieved of reporting by geographical areas.

Copies of the order were transmitted to railroad chief accounting officers with an October 3 letter from Director W. H. S. Stevens, of the Bureau of Transport Economics and Statistics. "The provisions of the order. Dr. Stevens said, "are practically the same as those of the freight com-

modity orders which have been vacated, although certain definitions and instructions, hitherto implicit or covered by correspondence, have been included either for clarification or to insure uniformity of practice. Most carriers are already observing these instructions in their reporting."

The vacated orders referred to by Dr. Stevens are those of November 22, 1927, December 14, 1938, November 16, 1939 and November 13, 1942. They go out when the new order becomes effective on January 1—"except so far as they relate to periods of time prior to that date."

Forwarder Traffic a New Group—In addition to mentioning the added classes resulting from the breakdown of old Class 701, the I. C. C. bureau director called attention to the fact that carload forwarder traffic will be placed in a separate group, which will cover all forwarder traffic involving freight forwarders holding certificates under the Interstate Commerce Act's Part IV. Forwarder traffic is carried in the current statistics as a footnote against Class 701.

The 262 reporting classes prescribed by the order are given odd numbers, the general N. O. S. classes at the end of each group are given numbers ending in "99" while group totals are given "900" numbers. Thus Group I—Products of Agriculture has individual classes with odd numbers running from 1 to 107; then Products of Agriculture, N. O. S., as Class 199 and Total Products of Agriculture (901). Group II—Animals and Products, Group III—Products of Mines, and Group IV—Products of Forests will have reporting classes with odd numbers in 200, 300 and 400 groupings, respectively. The classes of Group V—Manufactures and Miscellaneous run from 501 to 799. Group VI is Forwarded Traffic, Class 950, while Group VII is All L. C. L. Freight, Class 970.

"Miscellaneous" Broken Down—The breakdown of old Class 701 accounts for about 70 of the 105 new reporting classes. Most of the remaining 30 resulted from breakdowns of N. O. S. classes in other groups. For example, the Products of Agriculture group will have separate classes for tobacco siftings, sweepings and waste; soybeans; coffee; malt, N. O. S.; and seeds, N. O. S. Data on those commodities have heretofore been reported under the group's "catch all"—Products of Agriculture, N. O. S. Among other new classes are those for frozen fruits and vegetables and other commodities which have become important since the present classes were prescribed.

The new set-up will retain substantial comparability with present data. In setting up the new classes care was taken to do it to the extent practicable by subdividing old classes. The railroad committees which worked on the matter with commission representatives were subcommittees of the Accounting Division's committees on freight accounts and statistics and of the former A. A. R. Traffic Advisory Committee. Those three groups combined to function as the Joint Subcommittee of Traffic, Statistical and Freight Accounting Officers under the chairmanship of Walter J. Kelly, assistant to vice-president, Traffic Department, A. A. R.

O. D. T.'s King Heads Transport Coordinating Committee

Director J. Monroe Johnson of the Office of Defense Transportation has delegated to his deputy director, Homer C. King, the chairmanship of the Inter-Governmental Transportation Coordination Committee which was created recently by Director John R. Steelman of the Office of War Mobilization and Reconversion. As noted in the *Railway Age* of September 28, page 37, the O. W. M. R. director asked Colonel Johnson to proceed with the organization of the committee which is successor to the committee on export transportation formed last January at the direction of Mr. Steelman's predecessor, John W. Snyder, who is now secretary of the treasury.

As now organized, the committee includes representatives of 13 governmental agencies. Also, there are three subcommittees on waterways, grain, and coal, the first two being headed by Albert S. Johnson, assistant director, Railway Transport Department, O. D. T., while the coal subcommittee's chairman is Arthur G. Syran, director, Ship Requirements and Allocations Division, United States Maritime Commission. A. H. Gass, director of the Railway Transport Department, is another O. D. T. representative on the general committee. The Interstate Commerce Commission's representative is V. C. Clinger, director of the Bureau of Service.

Schindler Rate-Case Plea Is a "Closed Book"—Harriman

Secretary of Commerce W. Averell Harriman understands that Under Secretary Alfred Schindler's recent presentation in opposition to the railroads' Ex Parte 162 rate-increase petition is a "closed book." The secretary, who is chairman of the Union Pacific board of directors, made that response when asked at an October 7 press conference if the opposition statement would be withdrawn.

As noted in the *Railway Age* of September 28, page 532, Mr. Schindler, who was acting secretary of commerce in the interim between the ouster of former Secretary Wallace and the swearing-in of Mr. Harriman, filed with the Interstate Commerce Commission a statement suggesting that additional increases be withheld "until the traffic, the revenue and the operating expense picture for the remaining months of 1946 and the early months of 1947 is clear."

Mr. Harriman's press conference was held the day he was sworn in by Chief Justice Vinson of the Supreme Court. In replying to the question on the rate case, he said that he had heard of the Schindler statement, adding that he thought "that's done—it's a closed book." He then went on to say that while the department is interested in the welfare of the railroads, as it is in all industry, its business is to judge what is in the best interest of the economy as a whole.

Meanwhile, Mr. Harriman had issued a prepared statement in which he said in part: "Stable and rising production is the only way to maintain a high level of employment as well as to have available more goods for the security and better life of everyone. More and steady production is the most solid foundation for the prosperity of this country as well as the peace of the world."

In a subsequent statement issued on October 8, Mr. Harriman announced that, at his "strong request," Under Secretary Schindler "has agreed to remain in his present post . . . for the time being." The statement added that Mr. Schindler "has felt for some time, however, that he will be obliged to leave the government service and return to his long-deferred business interests within a few months."

Moves to Relieve Shortage of Chemical Tank Cars

Director John R. Steelman of the Office of War Mobilization and Reconversion announced on October 8 a series of interagency actions which are being taken to cope with what his statement called "a serious shortage of railroad tank cars used in transporting acids and liquefied petroleum gases." The shortage "has been accentuated by the reopening of ordnance plants for the production of nitrate fertilizer and by the greatly expanded needs of the liquefied petroleum gas industries," the statement said. It listed steps to be taken in the "emergency program" as follows:

1. The Office of Defense Transportation will locate 525 petroleum tank cars which can be converted into ammonium nitrate solution carriers. About 300 of these cars will be leased to the War Department and the remainder will replace War Department owned cars which will be recalled from industry service.
2. The War Department has cancelled its plans for immediate recall of 400 sulphuric acid tank cars now on lease to industrial concerns. However, about 100 of these cars, now in the ammonium nitrate solution service, and 200 other Army owned chemical carriers, will be withdrawn as quickly as O. D. T. assigns petroleum cars for conversion into ammonium nitrate carriers.
3. The Civilian Production Administration is taking necessary actions to step-up production of high pressure tank cars.
4. The War Assets Administration will refrain from further sales of high-pressure cars until the present emergency has passed.
5. The O. D. T. will take such actions as are necessary to increase the efficiency of use of existing high-pressure cars by eliminating cross-hauls, speeding turn-around time, or other means.
6. The O. D. T. will use its powers to insure that Army-owned high pressure cars which are withdrawn from commercial fertilizer production are replaced by other cars, preferably from new production, but from other sources if necessary.
7. O. D. T. also will make special efforts to replace cars withdrawn from the liquefied petroleum gas industries, either for the Army or for commercial fertilizer plants, as rapidly as production of new high pressure cars will permit.

With respect to the foregoing, Mr. Steelman said that, "where necessary," O. W. M. R. directives have been issued authorizing the various agencies to carry out the program. "I recognize," he added, "that the steps that are being taken will not completely solve the very serious problem confronting us. The only effective answer to the problem is the production of new cars. However, in spite of the most vigorous action by the C. P. A. with the full cooperation of the steel industry and car building industry it is extremely doubtful that an adequate number of new cars can be built before the peak demand of the winter season arrives. For this reason, it is imperative that every user of high-pressure cars cooperate to the fullest extent possible in obtaining the maximum use of every available car."

Complying with an O. D. T. request,

Chairman W. C. Kendall of the Car Service Division, Association of American Railroads, had already issued an October 3 circular to call the situation outlined in Mr. Steelman's October 8 statement to the attention of the railroads. The C. S. D. chairman said that O. D. T. Director Johnson had asked that "special instructions be issued to all concerned, indicating the urgent necessity of giving these pressure type tank cars expeditious movement, particularly through yards and terminals, in order that the tight car supply may be alleviated."

New Contract Rate for Travel of Armed Forces

The railroads have entered new contractural arrangements with the government, fixing the rate for Army and Navy travel at 10 percent under regular passenger fares. The previous contract, which expired with the end of land-grant rates on October 1, provided for a five per cent reduction in addition to any applicable land-grant discount.

The deductions apply to official Army and Navy travel, and the new contract's provisions as to group travel assure the railroads of that business except in special situations. It is understood that the Army originally sought to have the new contract provide for a 25 per cent reduction.

Two Western Roads Fined

The Interstate Commerce Commission has announced receipt of information from San Francisco, Calif., that on September 30 the Western Pacific entered a plea of nolo contendere to an information in 20 counts which had been filed against it on August 8 in the federal court for the Northern District of California. The information charged the carrier with having unlawfully failed to collect freight charges on 20 carload shipments within the maximum period of 96 hours permitted by the commission's regulations in Ex Parte No. 73. The statute violated was Section 3 (2) of the Interstate Commerce Act. Federal Judge Roche assessed a fine of $100 for each count, making a total of $2,000.

It also was announced by the commission that on September 16 judgment was entered in federal court at Council Bluffs, Iowa, against the Union Pacific to a complaint filed against it for failure to observe the provision of Second Revised Order No. 244, which pertains to furnishing freight cars to shippers for the purpose of loading grain at Council Bluffs.

The U. P. admitted the allegations of the complaint and the court entered judgment in the amount of $100 on each of 10 counts, totaling $1,000, plus $25 in costs.

Representation of Employees

The American Federation of Labor's Brotherhood of Railway Carmen of America has supplanted the Congress of Industrial Organizations' United Steelworkers of America as Railway Labor Act representative of carmen, their helpers and apprentices, employed by the Monongahela Connecting, according to results of a recent election which has been certified by the National Mediation Board. In the same election the C. I. O. organization defeated the challenging International Association of Machinists, A. F. of L., and retained its right to represent Monongahela Connecting machinists, their helpers and apprentices.

In other recent elections the A. F. of L.'s Employees Department won the right to represent mechanical department foremen and supervisors employed by the Louisiana & Arkansas, while its Brotherhood of Railway Clerks was certified as representative of the Colorado & Wyoming's clerical, office, station and storehouse employees. Neither of these groups was represented by any organization prior to the elections.

Depreciation Rates

Equipment depreciation rates for the reorganized Minneapolis & St. Louis and the Wheeling & Lake Erie are among those prescribed by the Interstate Commerce Commission in a recent group of sub-orders and modifications of previous sub-orders in the general equipment depreciation rates proceeding.

The M. & St. L. rates are: Steam locomotives, 3.14 per cent; other locomotives, 4.87 per cent; freight-train cars, new, 3.47 per cent, secondhand, 10.45 per cent, leased, 3.33 per cent; passenger-train cars, 4.43 per cent; work equipment, 4.95 per cent; miscellaneous equipment, 15.36 per cent. The W. & L. E. rates are: steam locomotives, 3.38 per cent; other locomotives, 4.9 per cent; freight-train cars, 3.27 per cent; work equipment, 3.5 per cent; miscellaneous equipment, 18.23 per cent.

A. F. of L. Wins First Round in Pullman Representation Case

Unions operating through the Railway Employees Department, American Federation of Labor, won the first round in a representation dispute involving the Pullman Company's mechanical department employees when the National Mediation Board decided recently that yard and shop forces should be combined for purposes of an election and grouped for voting purposes into crafts or classes. This ruling wherein the board said it was following the law and predecent is in accord with the A. F. of L. position, while separate elections with all shop employees voting as one group and yard employees as another were sought in turn by the Congress of Industrial Organizations' United Transport Employees of America and the Brotherhood of Sleeping Car Porters.

The shop employees numbering approximately 4,300 are now represented by the Pullman Car Employees Association of the Repair Shops while the yard employees, numbering about 8,500, are represented by the Independent Pullman Workers Federation. In making its determination, the N. M. B. found that the work of the employees involved is generally like that of railroad shop forces which are usually represented by craft unions on a system-wide basis. Also, it emphasized the Railway Labor's Act's requirements that employees be divided into crafts or classes for collective bargaining purposes; and its prior decisions holding that it was without discretion to split a single carrier or combine two or more carriers for the purpose of determining who shall be eligible to vote in representation cases.

With respect to the existing situation wherein the shop and yard employees involved have been separated for collective bargaining purposes over a period of several years, the board said that its failure to disturb that set-up was in accord with its policy in cases where there is agreement among the interested unions. "However," it added, "where contesting organizations cannot agree on the voting unit, as in the present case, the board has uniformly determined that voting groups shall include all employees of a particular craft or class."

Thus the decision orders a representation election among all yard and shop employees voting by the following crafts or classes: Machinists, blacksmiths, sheet metal workers, electrical workers, carmen, powerhouse employees and shop laborers. It was also determined that another voting group should be comprised of shop and yard storeroom non-clerical employees, since such employees "cannot be properly classified with the other shop craft employees outlined above." In the latter connection, the board emphasized that its determination "will not establish a precedent or preclude an ultimate determination in any future dispute as to the proper classification of these employees."

Car Service Orders

Provisions of Fourth Revised Service Order No. 180, which assesses super-demurrage charges on refrigerator cars have been suspended by the Interstate Commerce Commission insofar as they would apply on refrigerator cars held at or short of ports for transshipment to vessels, and on such cars when reconsigned or diverted. The suspension, embodied in Amendment No. 8 to the order, is effective from October 4 to October 17. It will provide relief with respect to cars caught in the present maritime strike, just as Amendment No. 7 did during the period of the previous walkout.

Amendment No. 2 to Service Order 422 postpones from October 15 until April 10, 1947, the expiration date of that order which requires railroads to unload forthwith cars on hand 10 days from their arrival date where unloading is a railroad responsibility. Meanwhile Director Clinger of the commission's Bureau of Service had issued General Permit No. 3 under this order to authorize railroads to disregard its provisions insofar as they applied to cars which arrived at the ports after 12:01 a.m. August 24. The permit was in effect from October 1 until October 10.

Also Director Clinger has issued General Permit No. 3 under Service Order No. 396 which requires reconsignment of refrigerator cars within 48 hours from 7 a.m. after arrival at diversion point. The permit, effective from October 3 until October 17, authorizes the railroads to disregard the order's provisions insofar as they apply to reefers which arrived at the ports on or after October 1.

Service Order No. 620, effective from October 7 until January 18, 1947, unless

otherwise modified, prohibits light-weighing of box cars intended for loading with imported wool at any point in the switching limits of Boston, Mass.

Service Order No. 614 which embargoed the Brunswick-Balke-Collender Company of Muskegon, Mich., on September 21 was vacated on October 4 by Service Order No. 614-A.

Retirement Board Tells How to Apply for State Tax Refunds

The Railroad Retirement Board has developed its procedure for handling railroad employees' claims for refunds of unemployment insurance payments made by them in certain states before June, 1939, for which provision was made in a law enacted this summer, as noted in *Railway Age* of August 10, page 246.

Field officers of the board and many employers will have available Form G-29, to be filled out in duplicate by the employee seeking a refund. The original is then to be mailed to the director of the Bureau of Wage and Service Records of the Railroad Retirement Board, 844 Rush street, Chicago 11, Ill., with the applicant retaining the duplicate. Receipt of the claim will be acknowledged by card mailed by the board. As it is expected that considerable time will be required to examine the claims, the board is asking applicants not to write to it about them after they have been filed.

The board's instructions suggest that "employees should ascertain from their records the amount of compensation upon which unemployment taxes were deducted with respect to each year during the period for which such deductions were made and with respect to each state to which taxes were paid. Care should be taken not to include in claims taxes deducted under the Carriers Taxing Act, since the refunds authorized cover only taxes paid" under state laws within the periods shown in the following tabulation:

State	Period
California	January 1, 1936—June 30, 1939
Idaho	January 1, 1937—March 17, 1937
Indiana	January 1, 1937—March 31, 1937
Kentucky	January 1, 1936—June 30, 1939
Louisiana	January 1, 1937—June 30, 1939
Massachusetts	January 1, 1937—June 30, 1938
New Hampshire	January 1, 1936—Sept. 30, 1937
New Jersey	January 1, 1938—June 30, 1939
Rhode Island	January 1, 1937—June 30, 1939

Interprets E. J. & E. Ruling for Mediation Board

While the Supreme Court's decision in the Elgin, Joliet & Eastern case establishes the individual employee's right to prosecute his grievance cases personally, through a minority union, or other representative of his own choosing, it does not invalidate provisions of collective bargaining agreements between a railroad and a majority union which stipulate that the carrier and such union shall negotiate respecting the grievance of any employees of the craft or class covered by the agreements. That is the gist of an opinion submitted recently by Attorney General Clark to the National Mediation Board at the latter's request.

The board asked Mr. Clark to reconsider a December 29, 1942 opinion of former Attorney General Biddle in the light of the E. J. & E. decision wherein the Supreme Court has held that a National Railroad Adjustment Board Award does not deprive affected employees of the right to ordinary court processes to obtain judgment with respect to their individual claims if it can be shown that such employees had not specifically authorized the union designated as the collective bargaining agent of their craft to act in their behalf for such purposes. (See *Railway Age* of March 30, page 693, and June 16, 1945, page 1072.)

Subject to Agreement—The 1942 opinion of former Attorney General Biddle, as summarized by Attorney General Clark, held that a carrier and a labor organization duly designated to be the representative of a craft or class of employees could lawfully include in a collective bargaining agreement a provision obligating both the carrier and the union to negotiate with each other, using the procedure specified in the contract, respecting the grievance of any employee in the craft or class. In leading up to his conclusion that such a contract provision has not been invalidated by the Supreme Court, Attorney General Clark had this to say:

"The opinion in the *Elgin* case recognizes that the collective bargaining representative may have an interest in many grievance cases, and implies, though without deciding, that it would be entirely appropriate for the unit representative to be consulted in grievance cases. There may, of course, be grievance cases in which the collective representative might have no interest. But it would be the best judge of that itself, and I see no objection to a contractural provision giving it the opportunity to participate in all grievance negotiations."

The attorney general does not read his predecessor's 1942 opinion as one which construed the contract provision under consideration as a bar to an individual employee's presentation of his own grievances. On the contrary, he found in the opinion a specific statement that the Railway Labor Act "obviously contemplates that an employee may personally present his own grievance to the management."

At the same time, Mr. Clark did find a need for reconsidering, in the light of the *Elgin* decision, that part of Mr. Biddle's opinion which held in effect that an individual employee not desiring to press his grievances personally was precluded by the statute and the rule in the agreement from presenting them through a representative "other than the representatives permitted by the collective bargaining agreement." After proceeding at some length through such a reconsideration, the attorney general said "it must be concluded that the collective agreement cannot legally restrict the individual employee as to the person he may designate as his representative for the settlement of his grievance."

Meanwhile, as noted above, the attorney general found no basis for condemnation of the grievance-procedure provisions of collective bargaining agreements which had been held valid by his predecessor. Mr. Clark summarized his conclusions as follows:

Employee's Privilege—"(1) The *Elgin* decision does not require reconsideration of the opinion expressed in 1942 that the collective bargaining representative has a sufficient interest in the dispositions of grievances to validate, under the Railway Labor Act, a provision in the collective bargaining agreement obligating the carrier and the collective representative 'to confer and negotiate with each other, in an attempt to reach a settlement' of all grievances. (2) The agreement, however, under the decision of the Supreme Court in the *Elgin* case, cannot legally preclude an aggrieved employee from also negotiating with the carrier, personally or through an individually chosen representative, for the settlement of his grievance. He may designate as his representative the union holding the contract or any other union or person otherwise qualified to act. He may negotiate, personally or by representative, whether or not the collective representative determines to pursue the matter. And the settlement of the grievance, to be binding on the individual employee, must have been authorized by him."

New N. M. B. Mediator

Frank K. Switzer has been appointed to the National Mediation Board's staff of mediators. The announcement of the appointment said that Mr. Switzer, who "is thoroughly familiar with the provisions of the Railway Labor Act and the adjustment of disputes in the transportation industry," has had 32 years of railroad service with the Wabash, including 15 years as timekeeper for transportation and mechanical department employees.

Materials and Prices

The following is a digest of orders, notices and information that have been issued by the Civilian Production Administration, Reconstruction Finance Corporation and the Office of Price Administration, since September 23 and which are of interest to railways:

Building Materials—Increases in the delivered prices for four categories of building and construction materials reflecting government approved rail freight increases have been authorized by the O. P. A.

The action, effective September 23, 1946, affects clay and shale building brick (common, glazed and face), structural clay tile, clay drain tile produced by other than vitrified clay sewer pipe manufacturers, and sand lime brick.

Except for clay drain tile produced in Ohio, Michigan and western Pennsylvania—known as "Structural Clay Products Area No. 4," the increase reflects the actual dollars-and-cents freight increase approved by the Interstate Commerce Commission and state regulatory agencies since July 1, 1946. In the case of clay drain tile, new ceiling prices will be about five per cent higher than those now existing, reflecting increases in the cost of both coal and freight.

The freight rate increase, approved by the I. C. C., amounts to an advance of 11.3 per cent in Official Classification territory. Elsewhere the advance in freight was set as six per cent.

Casein—An increase to 40 cents a lb. (from 33 cents) in the ceiling price of inedible casein used for industrial purposes, and removal of price controls on inedible casein, have been authorized by O. P. A. in Amendment 56 to RR 289 and revocation of Order No. 2 under Section 16 of RR 289, both effective Sept. 23, and Amendment 55 to Supplementary Order 132 effective Sept. 24.

Copper—O. P. A. has announced that no increase in current ceiling prices of primary and secondary copper, copper scrap, copper base alloy scrap or brass mill scrap is planned in the foreseeable future.

The announcement was made to end pricing uncertainties with respect to copper and to discourage any future withholding of copper or copper scrap in anticipation of a price increase, O. P. A. said.

Copper Scrap—Due to shortages of copper and copper base alloy scrap, the C. P. A. will allocate such scrap sales by the Army, Navy and Maritime Commission under Direction 22 to priorities Regulation 13, and under an amended Direction 19 to PR-13, effective Sept. 23. Such scrap shall be sold to smelters or reprocessors on their certification, or to the R. F. C. buying for smelters or reprocessors.

Decontrol—Exemption from price control of sulphur and steel castings, and suspension from control of specified automotive parts and accessories when sold by manufacturers, elastic braid and cord, woven elastic webbing and all fence posts, except those made of southern yellow pine, have been authorized in Amendment 57 under Supplementary O. P. A. Order 129, effective Oct. 4.

Douglas Fir Doors—An increase of 4.5 per cent in Douglas fir door ceilings has been authorized in Amendment 3 to O. P. A. Regulation 44, effective Oct. 7.

Forest Products—Individual adjustment of ceiling prices has been authorized for the service of pressure preservatively treated forest products and for pressure treated forest products in Amendment 4 to Supplementary O. P. A. Order 128, effective Oct. 9.

Hardwood Flooring—Resellers percentage markups on hardwood flooring have been revised to make a recent reduction of 10 percentage points apply only to hardwood flooring for which mill ceilings are established by O. P. A. Regulation 458. Amendment 24 to Second Revised Regulation 215 is effective Oct. 9.

Iron and Steel—Increases in the delivered prices of iron and steel products at Toledo, Ohio, Detroit and eastern Michigan, Mahoning Valley and Gulf and Pacific Coast basing points have been authorized in Amendment 18 to Revised O. P. A. Price Schedule 6-iron or steel products—and Amendment 43 to Revised Schedule 49, both effective Oct. 9.

Lumber—A ceiling price increase of $4 a thousand board feet for eastern spruce and $1 a thousand for northeastern white pine, jack pine, Norway pine (except Ottawa Valley white and Norway pine) and eastern hemlock is contained in Amendment 4 to third revised O. P. A. Regulation 219, effective Oct. 3.

Lumber—For the third consecutive month lumber production in the United States topped the three billion fbm. level, with the total for July estimated at 3,167,059,000 fbm., C. P. A. announced recently.

Production during July increased four tenths of one per cent over June despite a shortage of railroad cars and the fact that many plants in the West had shut down for vacation periods. Favorable factors included weather conditions, good for logging and milling, new mills, increased capacity of old mills, and more available manpower in the South.

Output of both softwood and hardwoods increased in the East and decreased in the West, resulting in an overall decrease of one per cent for softwoods and an increase of three per cent for hardwoods.

Lumber requirements for this year have been estimated at 33,867,000,000 fbm., C. P. A. has pointed out, that mill and distributors' inventories have been at all-time lows and need an increase of at least four billion fbm. to bring them to the minimum point of adequacy for proper distribution.

Paints—Ceiling prices of eight categories of trade sale paints have been raised from 2 to 6 per cent from current levels to reflect increased costs of linseed oil. Amendment 97 to Order A-1 under Section 1499. 159b of O. P. A. Regulation 188 is effective Oct. 3.

Pig Iron—O. P. A. has made a technical change in its general pig iron regulation to assist in increasing production of merchant pig iron under the premium payment plan established by Housing Expediter Wyatt, in Amendment 14 to Revised Price Schedule 10, effective as of Sept. 1.

Plywood—Builders of conventional type houses may use twice as much softwood plywood in home construction in the remainder of this year as in the third quarter, and softwood plywood will also be available for the first time to certain essential industrial users under O. P. A. limitation order L-358, issued to replace Direction 1A to Priorities Regulation 33.

Reinforcing Bars—Producers' ceiling prices for fabricated concrete reinforcing bars have been raised $2.50 a ton by increasing the permissible extras for bending and engineering, in Amendment 2 to Revised O. P. A. Regulation 159, effective Oct. 9.

Rope—Manufacturers may make Manila rope for any use in diameters as small as 5/8 in., under C. P. A. amendment to Order M-84, made to permit increased production of Manila rope in the fourth quarter.

Shingles—A producers' ceiling price increase on western softwood shingles averaging approximately 45 cents a square, or about 10 per cent, has been authorized in second revised O. P. A. R 164, effective Sept. 23.

Stock Millwork—Maximum prices for pine stock millwork have been raised 3.9 per cent to reflect recently approved increases in freight rates and in the price of western pine shop lumber. Amendment 21 to revised O. P. A. Regulation 293 is effective Oct. 7.

Valves—Air and vent valves for use on radiators, plumbing drainage specialties, and plumbing drainage staples, except those subject to Revised Price Schedule 100, have been added to the list of building materials suspended from price control in Amendment 56 to Supplementary Order 129, effective Oct. 4.

Equipment and Supplies

LOCOMOTIVES

The INDIAN STATE RAILWAYS are inquiring for 16 or 50 steam locomotives of the 4-6-2 type.

The MOZAMBIQUE RAILWAYS (Africa) are inquiring for eight steam locomotives of the 4-8-2 types.

The SPRINGFIELD SUBURBAN recently accepted delivery of two 44-ton Diesel-electric locomotives built by the American Locomotive Company and the General Electric Company.

The GRAFTON & UPTON recently placed in service two 44-ton Diesel-electric locomotives built by the American Locomotive Company and the General Electric Company.

The LAURINBURG & SOUTHERN recently put into operation one 44-ton Diesel-electric locomotive built by the American Locomotive Company and the General Electric Company.

The NEW YORK, NEW HAVEN & HARTFORD has repuested court authority to spend approximatetly $6,500,000 for the purchase of 15 additional Diesel-electric locomotives for use in freight service between New Haven, Conn., and Maybrook, N. Y., via the Poughkeepsie (N. Y.) bridge. Hearing on the petition has been set by Judge Carroll C. Hincks, United States District Judge, for October 18.

The new locomotives will be of the three-unit type, each unit powered by a 1,500-hp. V-type Diesel engine and capable of operation either in 4,500-hp. triple units, 3,000-hp. double units or 1,500-hp. single units. Conventional air brakes will be supplemented in the new engines by dynamic brakes whereby on descending grades traction motors are turned into generators to control the speed of the train.

FREIGHT CARS

September Car Deliveries Off

Deliveries of freight cars during September for use on domestic railroads totaled 4,016, including 772 from railroad shops, compared with 5,141 in August, which included 907 from railroad shops, the American Railway Car Institute has announced. The principal factor in the decreased production was an increasingly acute shortage of steel, the institute said. Freight car deliveries during the first nine months of the year amounted to 31,719, including 7,389 from railroad shops.

New car orders booked last month were 12,737, compared with 9,530 in August and 15,236 in July. Cars on order and undelivered on October 1, totaled 66,079.

Priorities for Cars

Colonel J. Monroe Johnson, director of the Office of Defense Transportation, stated this week that he had received assurances from the Civilian Production Administration that priorities would be arranged to enable car builders to deliver 7,000 new freight cars a month. Preference will be given deliveries of pressure tank and box cars.

Colonel Johnson explained that the deliveries will be on current orders. There has been no action as yet on his recent proposal for government financing of the construction of 50,000 box cars for lease to the railroads.

The LOUISVILLE & NASHVILLE is inquiring for 300 50-ton 53½-ft. flat cars.

PASSENGER CARS

The CHESAPEAKE & OHIO is inquiring for 247 lightweight passenger cars, of which 112 will be sleeping cars.

The NEW YORK, NEW HAVEN & HARTFORD is inquiring for 27 sleeping cars, of which 21 will have 14 roomettes and 4 double bedrooms and 6 will have 12 duplex single rooms and 5 double bedrooms. The cars will be used in service between Boston, Mass., and New York and on the "Federal" between Boston and Washington, D. C.

The BOARD OF TRANSPORTATION of New York City has ordered 400 subway cars and 30 extra trucks from the American Car & Foundry Company. The cost of this equipment, the inquiries for which were reported in *Railway Age* of August 31, page 385, will be $27,400,000. The builder has agreed to deliver the first car within 472 days after the contract is executed and to complete delivery in 767 days.

SIGNALING

The NEW YORK, NEW HAVEN & HARTFORD has placed orders with the Union Switch & Signal Company for the materials required to install automatic block signaling on the 38-mile double-track section between Providence (Bostan Switch), R. I., and South Worcester, Mass., involving H-5 searchlight signals to be automatically controlled by conventional d.c. track circuits, relays, rectifiers and housings. The construction forces of the New Haven will handle the construction.

The CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC has ordered from the Union Switch & Signal Company the necessary materials for the installation of automatic block signaling on its single-track line between Marmarth, N. D., and Harlowton, Mont., 340 miles, involving 300 H-2 searchlight signals, 1,300 relays and 525 housings, with the necessary rectifiers, transformers and switch boxes. The construction work will be done by railroad forces.

The ATLANTIC COAST LINE has placed orders with the Union Switch & Signal Company covering signal materials for the 125-mile main-line, double-track section between Richmond, Va., and Rocky Mount, N. C. Included are H-2 searchlight signals with plug couplers, coded d. c. track circuit materials, and instrument housings. All hand-throw switches are to be equipped with T-21 switch and lock movements and electric switch locks, with the main-line hand-operated crossovers utilizing a center lever for locking both ends. The field construction work will be done by railroad forces.

THE CHICAGO, BURLINGTON & QUINCY has placed an order with the Union Switch & Signal Co. covering the materials involved in the moving of a centralized traffic control machine from Brush, Colo., to McCook, Neb. The Brush machine controls the territory from Akron, Colo., to Derby (near Denver), 112 miles, and is now located within that territory. After being moved to McCook it will be located 143 miles east of the eastern end of the controlled territory. Two sets of carrier equipment will be used to make the link between the machine at McCook and the controlled territory. The carrier channels will be superimposed on the code line that was installed to handle the C. T. C. system between McCook and Akron. The McCook-Akron and the Akron-Derby machines will both be located in the same room at McCook and by means of one d.c. controlled and two carrier-controlled sections handle the entire territory from McCook to Derby.

CHINESE RAILROAD RESTORED.—The Railway Gazette (London) reports the reopening of the Canton-Hankow Railway in China, following restoration of tracks and completion of temporary trestles. During the war 102 of the 119 major bridges on the line were destroyed, five long tunnels were blown up, and most wayside structures demolished. Much of the material used in the restoration was obtained by dismantling other lines or through the substitution of whatever could be had, but six locomotives, 1,000 cars and some other supplies were provided by U. N. R. R. A.

Supply Trade

Skilsaw, Inc., manufacturer of portable electric tools at Chicago, has purchased the **Forss Pneumatic Tool Company,** of Aurora, Ill.

Milton B. Steinmetz, manager of railroad sales for the **Snap-On-Tools Corporation** has been appointed also industrial sales manager, a newly created position.

Wilma Soss, formerly associated with the Evans Products Company, has been appointed public relations consultant for the **Budd Company**, with headquarters in New York.

Leonard W. Beck has been appointed acting general sales manager of the **Cummins Engine Company,** with headquarters in Columbus, Ind. Mr. Beck will be responsible for the overall administration of the distribution division and in addition will retain his duties as manager of the central region, which position he has held

Leonard W. Beck

since 1939. **Fred W. Sparka** has been appointed manager of the Cleveland, Ohio, region to succeed **Byron A. Duling** who has been assigned to the home office to work directly under Mr. Beck.. The appointments of **Corwin B. Briscoe** as acting parts merchandising manager at Columbus, and **Norman E. Palmer** as the Washington, D. C., representative also were announced.

H. B. Ellis, director of parts and service of the **Electro-Motive division** of **General Motors Corporation,** has been appointed assistant to vice-president of G. M. C. Mr. Ellis' former position has been abolished.

J. A. Hill, formerly manager of the New York branch office of the **Independent Pneumatic Tool Company,** has been appointed manager of electric tool sales, with headquarters in Chicago. The company also has announced the opening of a branch office at 426 Elm street, Cincinnati, Ohio, and **W. C. Rush,** formerly in the St. Louis, Mo., branch, has been appointed manager of the new office.

Richard J. Shanahan has been appointed midwestern representative of **Joseph Sinkler, Inc.,** at Chicago. Mr. Shanahan began work in railroad sales in 1929, with the Boss Bolt & Nut Co., and a year later joined the sales staff of the Maintenance Equipment Company, with whom he remained until 1940. At that time he became

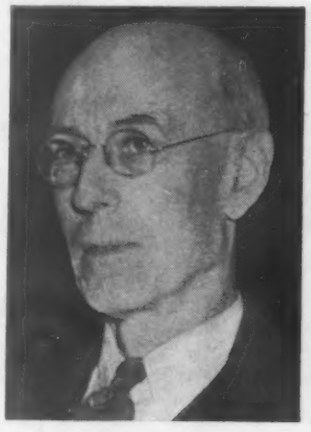
Richard J. Shanahan

associated with the Gustin Bacon Manufacturing Company, and in 1944 became sales manager for the U. S. Wind Engine and Pump Company. In 1944 Mr. Shanahan went into business for himself.

Arthur W. Frank, district manager of the **Hevi Duty Electric Company,** with headquarters at Chicago, has been appointed director of research, with headquarters at Milwaukee, Wis. Mr. Frank is succeeded by **Lawrence S. Tilden,** assistant district manager.

Frank P. Smith has been appointed sales engineer in the Cleveland, Ohio, region for **E. I. du Pont de Nemours & Co.,** with headquarters in Pittsburgh, Pa. Mr. Smith will serve the clientele formerly served by W. J. Bradley for the Du Pont finishes division.

Sherman Miller, formerly chief mechanical engineer, has been appointed vice-president in charge of production engineering for the **American Locomotive Company,** with headquarters as before at Schenectady, N. Y. **Raymond J. Finch**



Sherman Miller

has been appointed chief mechanical engineer, to succeed Mr. Miller. Beginning his career with American Locomotive in the erecting shop and drawing room of the Dunkirk, N. Y., plant, Mr. Miller was transferred to Schenectady in 1907. He

served as general superintendent of the general drawing room from 1916 to 1941, in which year he was appointed chief mechanical engineer.

Orland J. Engle has been elected controller of the **Pullman-Standard Car Manufacturing Company,** succeeding **Richard W. Higgins,** who has resigned after more than 54 years service. Mr. Higgins will remain with the company as a consultant. **George C. Thiele** has been appointed assistant to the vice-president of Pullman-Standard.

John D. Cannon, vice-president and treasurer of the **Morton Manufacturing Company,** Chicago, has been elected president, succeeding **Charles D. Morton,** who retains his position as chairman of the board of directors. **James A. King,** vice-president, has been placed in charge of all railway division sales of the company. **Chester T. Stansfield** has been appointed eastern sales manager, succeeding **William M. Wampler,** whose death was reported in the *Railway Age* of August 24. **Walter M. Klopsch** has been appointed chief engineer. A picture and sketch of Mr. Stansfield appeared in the *Railway Age* of September 28 in connection with his election as president of the **Ellcon Company** and the **National Brake Company,** which positions he retains.

Financial

ATLANTIC & EAST CAROLINA.—*Note.*—This road has applied to the Interstate Commerce Commission for authority to issue a $269,935 collateral trust 2¾ per cent note to be issued in connection with a conditional sales agreement between the applicant and the Electro-Motive Division of the General Motors Corporation and an agreement and assignment between the latter and the Wachovia Bank & Trust Company, Winston-Salem, N. C. The note will be secured by a first lien on four Diesel-electric locomotives, the original cost of which was $319,919, and $243,269 will be used to purchase two new 1,350-hp. Diesel-electrics from Electro-Motive. The remainder will be used to pay off the balance due on equipment trust notes issued March 25, 1944. According to the applicant the purpose of retiring these notes is to secure a lower interest rate, reducing it from 4 per cent to 2¾ per cent, and to spread the payments over a ten-year period, whereas the present notes run for five years.

DELAWARE, LACKAWANNA & WESTERN.—*Equipment Trust Certificates.*—This road has applied to the Interstate Commerce Commission for authority to assume liability for $4,250,000 of equipment trust certificates, series D, to finance in part the acquisition of equipment estimated to cost a total of $5,371,618. The equipment includes 6 Diesel-electric locomotives, 500 all-steel hopper cars and 13 passenger-train cars. The certificates would be sold on the basis of competitive bidding with the interest rate fixed by such bids; they would mature in 20 semi-annual installments of $212,500 each on May 1 and November 1 of each year from 1947 to 1956.

ERIE.—*New Director.*—Charles H. Diefendorf, president of the Marine Trust Company, Buffalo, N. Y., has been elected a director of this road to fill the unexpired term of the late Frank C. Wright.

ERIE.—*New Director.*—Raymond J. Wean, president of the Wean Engineering Company, has been elected a director of this road to succeed the late A. C. Davis.

GREEN BAY & WESTERN.—*Suit Dismissed.*—A suit by holders of this road's class B debentures for the award of $809,618 plus interest as their share of the net earnings from 1924 to 1943 was dismissed in New York on October 3 by Federal Judge William Bondy, who held that under the provisions of the debentures the portion of net earnings payable to holders of this class of security was discretionary and not mandatory.

HOBOKEN MANUFACTURERS.—*Reorganization Plan.*—The trustee of this road has filed with the Interstate Commerce Commission a proposed plan of reorganization. It sets up alternative arrangements depending upon the outcome of an investigation in which the trustee anticipates he may establish the debtor's right to recover "substantial sums of money." If the estate is thus augmented, the proposed plan indicates that the present common stock may remain undisturbed while creditors would receive 50 per cent of their claims in cash and 50 per cent in 10-year 6 per cent debentures. If there is no recovery of money, the creditors will receive one share of new common stock for each $1,000 of their claims; and the old common will be wiped out. The road's properties include facilities formerly used as the New York terminus of Seatrain Lines which operated seagoing car ferries between New York and Havana, Cuba, and New Orleans, La.; and the trustee advised the commission that future earnings should be adequate to meet operating expenses and charges, if there is a resumption of Seatrain operations. He also said that, meanwhile, the facilities are available to any operator of a similar car-ferry service.

MISSOURI PACIFIC.—*Acquisition.*—The International-Great Northern, affiliate of this road, has applied to the Interstate Commerce Commission for authority to extend its line by the acquisition of the Rio Grande & Eagle Pass properties which consist of a 7-mile line between Laredo, Tex., and Farias, and 1¼ miles of spur tracks. The R. G. & E. P. is seeking authority to abandon the properties.

ST. JOHNSBURY & LAKE CHAMPLAIN.—*Reorganization.*—Lewis A. Putnam, reorganization manager of the St. Johnsbury & Lake Champlain Railroad Company, has applied to the Interstate Commerce Commission for authority to transfer its property and franchises to the St. Johnsbury & Lake Champlain Railroad and for authority to issue and exchange the following securities pursuant to a plan of reorganization of the debtor road under Section 77 of the Bankruptcy Act: (1) $400,000 in principal amount of new Series A 4 per cent mortgage bonds, due in 1975; (2) $300,000 of income mortgage 4½ per cent bonds, due in 1995 and (3) 6,000 shares of common stock having a par value of $100 per share, for exchange in reorganization. The applicant also seeks authority to reserve 3,000 additional shares of common stock for issuance upon exercise of conversion rights by holders of the income mortgage. The Boston & Maine is the only creditor entitled to receive securities of the debtor under the plan of reorganization.

VIRGINIAN.—*New Director.*—J. W. Damron, Columbus, Ohio, has been elected a director of this road to succeed William M. Ritter, resigned.

Average Prices Stocks and Bonds

	Oct. 8	Last week	Last year
Average price of 20 representative railway stocks..	46.85	47.85	59.70
Average price of 20 representative railway bonds..	88.62	88.68	98.47

Abandonments

COLORADO & SOUTHERN.—This road has applied to the Interstate Commerce Commission for authority to abandon a portion of its line between Coalton, Colo., and Superior, 3.6 miles.

DENVER & RIO GRANDE WESTERN.—This road has applied to the Interstate Commerce Commission for authority to abandon a portion of its so-called San Pete Valley branch, extending approximately 24 miles from Moroni, Utah, to Nephi, where the segment connects with the Union Pacific.

FORDYCE & PRINCETON.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon a portion of its line from a point near Fordyce, Ark., to Ivan, approximately 6 miles. No traffic has moved over the segment since July, 1942.

NEW YORK, NEW HAVEN & HARTFORD.—Division 4 of the Interstate Commerce Commission has authorized this line to abandon a New York harbor car-float operation extending approximately 8 miles between Oak Point and Piers 38 to 42, inclusive, East River. In approving the transaction, the commission imposed the usual employee-protection conditions.

PACIFIC ELECTRIC.—This road has applied to the Interstate Commerce Commission for authority to abandon a line running for a distance of about one mile along Broadway in Glendale, Calif.

RIO GRANDE & EAGLE PASS.—This road has applied to the Interstate Commerce Commission for authority to abandon its entire line which extends from Laredo, Tex., to Farias, 7 miles. Authority to acquire the line is being sought by the International-Great Northern, a constituent of the Missouri Pacific Lines.

TONOPAH & TIDEWATER.—This road has applied to the Interstate Commerce Commission for authority to abandon its entire line, extending 169.07 miles from Ludlow, Calif., to Beatty, Nev. No traffic has moved

over the line since 1940 and it was operated at a loss for 10 years prior to that time, according to the application.

UNION PACIFIC.—This road has applied to the Interstate Commerce Commission for authority to abandon a 13.4 mile section of its Greeley branch between Barnesville, Colo., and Briggsdale.

UNION PACIFIC.—Acting upon petition of this road and the Oregon-Washington Railroad & Navigation, Division 4 of the Interstate Commerce Commission has dismissed the application in Finance Docket 15389 in which the U. P. asked authority to abandon operation of a line which the O.-W. R. & N. sought to abandon. The line extends from Blakes Junction, Ore., to Robinette, 33.09 miles.

WESTERN MARYLAND.—This road, together with the Somerset Coal Railway, have applied to the Interstate Commerce Commission for authority to abandon approximately 4 miles of track in Somerset County, Pa.

Railway Officers

EXECUTIVE

Max Raven Brockman, who was recently appointed assistant to vice-president (mechanical) of the Southern, with headquarters at Washington, D. C., was born at Greensboro, N. C., on December 31, 1894, and entered railway service in March, 1912, as a machinist apprentice for the Southern at Greensboro, transferring to Spencer, N. C., in 1915, where he advanced to machinist in 1916. During World War I Mr. Brockman served as a machinist instructor at the U. S. Naval Aeronautic Training Station at Pensacola,

Max R. Brockman

Fla. In 1918, he returned to the Southern as machinist at Greensboro, and became night foreman at Charlotte, N. C., in 1919. From 1920 to 1926 he served as general foreman at Selma, N. C., Greenville, S. C., and Asheville, N. C., successively, then from 1926 to 1944 as master mechanic at Bristol, Va., Macon, Ga., Somerset, Ky., and Spencer, N. C. Mr. Brockman became chief mechanical engineer at Washington in June, 1944, and maintained this post until his recent promotion became effective on October 1.

L. L. Lapp, executive general agent of the Gulf, Mobile & Ohio, with headquarters at Washington, D. C., has been transferred to Kansas City, Mo.

C. M. Hull, assistant superintendent of the New York, New Haven & Hartford, has been appointed assistant to the vice-president, with headquarters as before at New York.

John P. Chadwick who retired on October 1 as assistant to the vice-president (mechanical) of the Southern, with headquarters at Washington, D. C., was born at Brooklyn, N. Y., on August 4, 1883, and began his railway career as a special representative at the Cooke Locomotive Works in Paterson, N. J. He subsequently served as draftsman, shop engineer, test engineer and as locomotive designer. Upon the formation of the American Locomotive Company, Mr. Chadwick was transferred to the main plant at Schenectady, N. Y., as locomotive designer, remaining there until May 15, 1906, when he entered the service of the Southern at Washington, D. C., as standardizing draftsman. He was promoted to chief draftsman in 1907 and held that position until 1924 when he became mechanical engineer. On November 1, 1931, he was appointed assistant to vice-president (mechanical), the post from which he recently retired.

FINANCIAL, LEGAL AND ACCOUNTING

W. H. LeValley has been appointed auditor of freight accounts of the New York Central, with headquarters at Detroit, Mich., succeeding **W. J. Daeschner,** who has been assigned to special duties. **H. L. Meyer** has been appointed assistant auditor of freight accounts at Detroit.

Heber Smith, assistant freight claim agent on the Southern Pacific, with headquarters at San Francisco, has been promoted to freight claim agent, with the same headquarters, succeeding **William C. Fitch,** whose retirement was reported in the *Railway Age* of September 28.

Kenneth A. Carney, general claim agent of the Illinois Central, with headquarters at Chicago, has been promoted to chief claim agent, with the same headquarters, succeeding **William J. Heckmann,** whose death on September 24 was reported in the *Railway Age* of September 28. Mr. Carney is succeeded by **William M. Holwick,** chief clerk at Chicago. **William R. Hovious,** special claim agent, has been promoted to assistant general claim agent at Chicago, a newly created position.

S. L. Stein, whose promotion to general claim agent of the Missouri-Kansas-Texas, with headquarters at Parsons, Kan., was reported in the *Railway Age* of September 21, was born on August 8, 1880, at Shattuc, Ill., and began his railroad career in 1905 as a stenographer and clerk in the road's purchasing department at St. Louis, Mo. In 1907 Mr. Stein joined the Missouri Pacific, holding the positions of train-

S. L. Stein

master's clerk, accountant and secretary to superintendent, with headquarters successively at DeSoto, Mo., Poplar Bluff and Atchison, Kan. He was advanced to chief clerk to district claim agent in 1911 and later to claim agent, and returned to the Katy in the latter position in 1914. In 1937 he was promoted to assistant general claim agent at Parsons, which position he held until his recent promotion.

C. F. Schwarz, whose election as controller of the Chicago & Eastern Illinois, with headquarters at Chicago, was reported in the *Railway Age* of October 5, was born on January 17, 1889, at Danville, Ill., and began his railroad career in 1907 with the road as a piece work clerk at Danville. Mr. Schwarz was advanced successively to positions as clerk to the superintendent of shops at Oaklawn, Ill., accountant-clerk in the office of superin-

C. F. Schwarz

tendent motive power, and in 1913 to chief clerk. He left the road's service in 1916, but returned in 1918 to his former position. In 1931 he was transferred to Chicago, where he became chief clerk in the tabulating department, and in 1938 he was

further advanced to chief clerk to controller. He became assistant controller in 1944, which position he held until his current promotion.

OPERATING

Charles H. Longman, whose promotion to general manager, eastern district, of the Chicago & North Western, with headquarters at Chicago, was reported in the *Railway Age* of October 5, began his railroad career in 1907 as a clerk and lampman, and subsequently held the positions of locomotive fireman, engineer, road foreman of engines and trainmaster. With the exception of a short period spent as trainmaster at Boone, Iowa, Mr. Longman's headquarters have been located at Chicago. He served as supervisor of safety for three years, and later was advanced to the positions of assistant to general manager, assistant to vice-presirent and general manager, and assistant general manager. In 1940 he was promoted to assistant to the chief operating

Charles H. Longman

officer, and in 1944 was advanced to assistant to vice-president in charge of operations, which position he held at the time of his recent promotion.

N. A. Meyer, whose retirement, due to ill health, as superintendent of transportation of the Chicago, Milwaukee, St. Paul & Pacific lines west of Mobridge, S. D., with headquarters at Seattle, Wash., was reported in the *Railway Age* of September 21, was born on April 20, 1889, and began his career with the road in 1902 as a telegraph operator and relief agent on the Northern division. In 1907 he was promoted to train dispatcher at Milwaukee, Wis., where he remained until 1917, when he was advanced to chief train dispatcher at Mason City, Iowa. The following year Mr. Meyer returned to Milwaukee where he became trainmaster of the Milwaukee terminals. In 1919 he was appointed assistant superintendent of transportation, lines east, with headquarters at Chicago, which position he held until 1923, when he was advanced to superintendent of transportation, lines west, at Seattle. Mr. Meyer served as chairman of the railroad contact committee of the Pacific Northwest Advisory Board from 1931 to 1944.

Leon B. Kendall, whose promotion to assistant to vice-president in charge of operations of the Chicago & North Western, with headquarters at Chicago, was reported in the *Railway Age* of October 5, began his career with the road in 1910 as a telegrapher, and later advanced to

Leon B. Kendall

the positions of chief train dispatcher, trainmaster, assistant superintendent and superintendent. He was promoted to acting assistant general manager in April, 1943, and in October of that year he was appointed assistant general manager, which position he held at the time of his recent promotion.

Fred J. Byington, whose retirement as general manager, eastern district, of the Chicago & North Western, with headquarters at Chicago, was reported in the *Railway Age* of October 5, began his railroad career in 1890 as a messenger in the road's station at Rochelle, Ill. He became a telegrapher, and served on the Galena and Wisconsin divisions from 1891 to 1894. He held the position of train dispatcher at Chicago, Oshkosh, Wis., Ashland, Belle Plaine, Iowa, Boone, and Chadron, Neb. For a brief period in

Fred J. Byington

1899, Mr. Byington was train dispatcher on the Union Pacific at Evanston, Wyo., returning in that position to the C. & N. W. at Boone. In 1910 he was promoted to assistant superintendent of the Madison division at Baraboo, Wis., and Adams, and later held the position of superintendent successively at Boone, Escanaba, Mich., and Chicago. In 1924 he was advanced to assistant general superintendent, and became general superintendent in 1938. He was promoted to general manager in 1940, which position he held at the time of his retirement.

Charles T. Smith, who was recently appointed superintendent of the Union Freight Railroad, with headquarters at Boston, Mass., was born at Plattsburg, N. Y., on January 15, 1877, and began his railway service in September, 1898, as a brakeman for the New York Central. In 1904 he went with the New York, New Haven & Hartford in the same capacity, and was later promoted to conductor and assistant yardmaster. He was transferred to the Boston freight terminal as assistant night general yardmaster in 1917, and advanced to general yardmaster in 1926. In 1928 Mr. Smith was appointed assistant superintendent of the Union Freight, which handles the interchange of freight cars between the New Haven, the Boston &

Charles T. Smith

Albany, and the Boston & Maine, in addition to serving local industries and business firms. He held the latter post until his present appointment was made.

TRAFFIC

Boyd Baxter has been appointed agricultural agent of the Union Pacific, with headquarters at Pocatello, Idaho.

William J. Resetarits has been appointed general agent of the Illinois Terminal with headquarters at Chicago, succeeding **Donald L. Behler,** whose transfer to Detroit, Mich., was reported in the *Railway Age* of October 5.

J. R. Staley, general freight traffic manager of the Missouri Pacific, with headquarters at St. Louis, Mo., will resign his position on October 16, to become general traffic manager of the Quaker Oats Company.

W. F. Coyne, whose promotion to assistant to passenger traffic manager of the Southern Pacific, with headquarters at Chicago, was reported in the *Railway Age* of September 28, began his railroad career on the Pennsylvania as a stenog-

rapher in the district storekeeper's office at New York. Later Mr. Coyne was transferred to the passenger department, where he advanced to the position of transportation clerk. In 1927 he accepted a position as correspondent in the passenger department of the Southern Pacific at New York, and successively advanced to the positions of passenger agent, city passenger agent and traveling passenger agent. He was further advanced, in 1942, to assistant general agent, passenger department, which position he held until 1944. At that time he was promoted to general agent, passenger department, at Chicago, the position he held at the time of his current promotion.

J. A. Beatty, city passenger agent of the Northern Pacific, with headquarters at Seattle, Wash., has been promoted to district passenger agent, with the same headquarters, succeeding **E. L. Carey,** who has retired.

Richard C. Stanley, whose appointment as general passenger agent of the New York, New Haven & Hartford, with headquarters at New York, was announced in the September 7 *Railway Age,* was born in New York on June 13, 1891, and was graduated from St. Francis College. Mr. Stanley has served the New Haven for more than 31 years in various positions, including that of general passenger agent for the New England Steamship Company, a New Haven subsidiary. He was assistant general passenger agent of the railroad at New York from 1937 until

Richard C. Stanley

his present appointment, in which capacity he was in charge of the Pilgrim Tours and the Travel Bureau at Grand Central Terminal.

ENGINEERING & SIGNALING

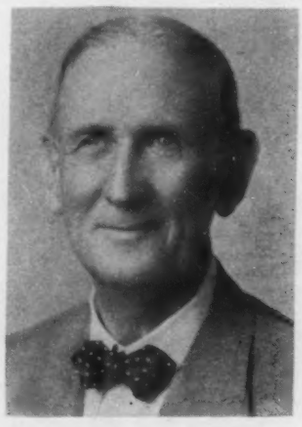
Sidney T. Corey, office engineer of the Chicago, Rock Island & Pacific, with headquarters at Chicago, has retired.

F. M. McKenna has been appointed telegraph and telephone engineer of the Union Pacific, with headquarters at Pocatello, Idaho, succeeding **John Hilbert,** whose retirement was reported in the *Railway Age* of October 5.

W. B. Jacobson has been appointed division engineer of the Denver & Rio Grande Western, with headquarters at Pueblo, Colo., succeeding **G. S. Turner,** whose appointment as chief engineer of the Denver & Salt Lake, with headquarters at Denver, Colo., was reported in the *Railway Age* of September 21.

MECHANICAL

L. E. Dix, whose promotion to mechanical superintendent of the Texas & Pacific, with hearquarters at Dallas, Tex., was reported in the *Railway Age* of October 5, began his railroad career as a machinist apprentice on the Chicago, Rock Island & Pacific, at Horton, Kan. Mr. Dix later served as machinist on the Atchison, Topeka & Santa Fe and on the Missouri Pacific, and as master mechanic of the Union, a subsidiary of the M. P., at Memphis, Tenn. In 1916 he was appointed master mechanic of the Texas & Pacific-Missouri Pacific Terminal at



L. E. Dix

New Orleans, La., a joint subsidiary of the T. & P. and M. P., and in 1920 he was made master mechanic of the T. & P. at Fort Worth, Tex. In 1922 he was appointed fuel supervisor, which position he held until his recent promotion. From 1941 to 1946, Mr. Dix served as president of the Railway Fuel Traveling Engineers Association.

PURCHASES AND STORES

Edwin W. Peterson, general storekeeper of the Bangor & Aroostook, with headquarters at Milo, Me., has been appointed purchasing agent at Bangor, Me., succeeding **Clinton D. Baldwin,** whose biography appeared in the September 28 issue of *Railway Age,* in connection with his retirement after 34 years' service. Mr. Peterson was born at Boston, Mass., on March 12, 1890, and entered railroading in 1908 as a junior clerk and messenger for the Boston & Albany, advancing to timekeeper in 1911. From 1912 to 1920 he held various clerical positions in the office of the superintendent of motive power and in the general storekeeper's office. Mr. Peterson joined the Bangor & Aroostook as general storekeeper in March, 1920. A veteran of World War I and a captain in the Officers Reserve Corps, he was called to active duty as a major with the Railway Section, Office of the Chief of Engineers, in March, 1941, with headquarters at Washington, D. C. After service there as contracting and training officer, Major Peterson went to England as supply

Edwin W. Peterson

officer for the Military Railway Service for a year, rising to the rank of lieutenant colonel. Mr. Peterson's appointment as purchasing agent became effective on October 1. He is actively associated with the P. & S. division of the Association of American Railroads and is a member of the Executive committee of the New England Railroad Club.

OBITUARY

Charles A. Bingaman, who retired as assistant mechanical engineer of the Reading at Reading, Pa., in December, 1938, died there on October 2.

D. R. Cooper, district passenger agent of the New York Central, with headquarters at Indianapolis, Ind., died suddenly of a heart attack on October 1, at San Francisco.

Walter Douglas, former chairman of the board of the Southern Pacific of Mexico, died at his home in New York on October 3, at the age of 75. He had also served as a vice-president of the El Paso & Southwestern (now the Southern Pacific), as well as having been one of the projectors and builders of the E. P. & S., and for many years one managing director.

George F. Doyle, chief special agent of the Illinois Central, with headquarters at Chicago, died suddenly at his home in that city on October 5. Mr. Doyle was born on May 2, 1896, at Scobey, Miss. He attended Mississippi A. & M. College. He began his railroad service with the I. C. in 1914 as a millman in the road's mechanical department, after which he entered military service in World War 1. In 1920 he joined the special agent's department as a patrolman, and in 1924 he was transferred to Council Bluffs, Iowa, where he became assistant special agent. He was advanced to special agent at Chicago in 1927, and in 1939 was further advanced to assistant chief special agent. He was promoted to chief special agent in 1941.

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1946

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income 1946	Net railway operating income 1945
Akron, Canton & Youngstown	Aug.	171	$402,197	$84	$425,665	$65,142	$45,170	$23,655	$129,291	$281,483	66.1	$144,182	$43,777	$80,486	$4,241
	8 mos.	171	2,482,642	887	2,623,168	487,760	327,463	187,551	956,277	2,119,675	80.8	503,493	179,647	179,941	364,739
Alton	Aug.	959	1,639,464	604,636	2,561,255	529,468	374,757	81,886	1,056,947	2,216,528	86.5	344,727	194,663	—56,758	44,695
	8 mos.	959	11,368,169	5,374,225	19,208,254	4,267,280	3,634,390	652,313	8,413,615	18,406,281	95.8	801,973	1,429,984	—1,929,878	3,181,520
Atchison, Topeka & Santa Fe System	Aug.	13,085	27,183,509	5,976,397	36,824,407	5,936,681	6,944,599	779,383	12,885,100	28,105,280	76.3	8,719,127	4,313,404	3,878,667	3,810,250
	8 mos.	13,085	194,417,552	55,502,106	271,719,768	40,714,025	53,458,502	5,894,362	98,104,851	205,780,728	75.7	65,939,040	35,825,849	29,897,742	39,745,127
Atlanta & West Point	Aug.	93	223,643	108,710	370,872	36,050	63,407	12,199	175,615	307,213	82.8	63,659	11,543	32,717	26,630
	8 mos.	93	1,639,787	702,000	2,618,654	345,584	454,320	98,507	1,333,506	2,396,178	91.5	222,476	*40,242	100,506	244,130
Western of Alabama	Aug.	133	221,512	108,339	363,701	42,326	72,002	11,481	142,990	286,842	78.9	76,859	47,841	33,713	37,858
	8 mos.	133	1,613,452	732,519	2,564,197	392,722	513,393	95,055	1,121,231	2,272,582	88.6	291,615	89,577	219,234	307,952
Atlantic Coast Line	Aug.	5,571	6,850,410	2,114,305	9,632,263	2,497,843	1,675,221	238,946	4,233,317	9,102,848	94.5	529,415	*200,000	581,886	197,673
	8 mos.	5,569	59,487,574	19,442,491	84,510,319	21,356,022	14,571,154	2,015,620	36,102,959	77,877,987	92.2	6,632,332	5,100,000	—1,006,528	5,685,334
Charleston & Western Carolina	Aug.	343	301,789	12,194	323,533	71,800	68,361	12,689	132,090	294,773	91.1	28,760	20,000	1,429	1,862
	8 mos.	343	2,362,336	70,094	2,498,007	598,249	550,530	99,643	1,091,061	2,403,606	96.2	94,401	170,000	—99,325	289,810
Baltimore & Ohio	Aug.	6,139	24,911,778	3,066,153	29,371,535	3,989,654	6,412,016	635,043	11,978,770	24,232,229	82.5	5,139,306	1,644,516	3,011,634	3,669,111
	8 mos.	6,139	159,413,442	26,126,407	196,651,788	29,495,728	47,803,293	4,903,844	88,343,343	180,515,733	91.8	16,136,055	12,951,423	139,688	30,471,018
Staten Island Rapid Transit	Aug.	29	200,084	127,353	340,091	48,715	33,267	1,443	167,386	275,874	81.1	64,217	37,304	3,217	84,488
	8 mos.	29	1,255,014	940,896	2,286,281	405,640	292,077	12,304	1,249,323	2,149,651	94.0	136,630	289,732	—306,871	695,043
Bangor & Aroostook	Aug.	602	503,364	64,102	591,119	221,970	178,464	8,204	236,854	679,928	115.0	—88,809	5,057	—55,915	46,660
	8 mos.	602	6,601,224	452,010	7,251,875	1,849,538	1,628,398	58,526	2,314,517	6,157,983	84.9	1,093,892	600,842	521,476	785,244
Bessemer & Lake Erie	Aug.	214	2,397,466	2,197	2,414,236	142,520	445,309	15,497	456,998	1,107,542	45.9	1,306,694	543,232	992,548	357,729
	8 mos.	214	9,033,428	13,766	9,158,689	1,136,913	3,259,875	124,050	2,614,865	7,502,543	81.9	1,656,146	1,351,040	2,203,932	2,432,962
Boston & Maine	Aug.	1,762	4,712,522	1,762,631	7,057,651	1,104,288	1,065,366	87,516	2,979,009	5,507,855	78.0	1,549,796	457,899	780,052	858,650
	8 mos.	1,764	34,480,923	11,675,762	50,546,295	8,663,446	8,531,384	784,254	22,598,283	42,803,098	84.7	7,743,197	3,744,297	1,725,642	5,574,473
Burlington-Rock Island	Aug.	228	154,273	76,744	250,691	44,299	26,741	4,263	119,466	212,335	84.7	38,356	9,895	—18,532	5,478
	8 mos.	228	1,555,782	549,261	2,259,316	350,251	257,933	31,960	890,213	1,670,143	73.9	589,173	78,512	159,402	396,825
Cambria & Indiana	Aug.	35	148,058	.....	148,128	13,224	48,828	632	20,555	90,845	61.33	57,283	64,359	82,358	48,293
	8 mos.	35	872,398	.....	872,914	102,088	386,365	5,377	144,754	698,864	80.06	174,050	372,806	422,555	397,103
Canadian Pacific Lines in Maine	Aug.	234	217,658	65,847	315,963	53,454	36,929	9,235	83,661	193,516	61.2	122,447	21,849	53,279	40,528
	8 mos.	234	2,745,561	528,187	3,528,137	631,441	542,785	69,031	1,408,289	2,747,309	77.9	780,828	179,987	25,796	951,962
Canadian Pacific Lines in Vermont	Aug.	90	107,286	26,788	154,371	37,686	12,368	3,330	63,736	122,382	79.3	31,989	12,611	—22,757	—93,898
	8 mos.	90	783,033	141,466	1,070,290	344,594	249,568	25,021	930,566	1,594,044	148.9	—523,754	87,910	—929,338	—840,450
Central of Georgia	Aug.	1,815	2,021,555	383,303	2,655,785	435,623	453,796	94,085	1,343,254	2,482,594	93.5	173,191	*85,399	285,171	437,214
	8 mos.	1,815	15,900,643	3,353,943	21,229,399	3,547,408	3,709,102	739,039	10,516,043	19,757,212	93.1	1,472,187	1,322,752	297,507	3,683,352
Central of New Jersey	Aug.	419	2,683,187	629,128	3,480,767	377,620	587,474	50,283	1,710,698	2,889,452	83.0	591,315	407,153	43,091	382,759
	8 mos.	620	24,005,457	4,487,371	30,335,831	3,885,108	5,985,773	506,637	15,546,530	27,399,353	90.3	2,936,478	3,178,789	—1,440,475	4,213,571
Central R. R. Co. of Pennsylvania	Aug.	230	1,048,485	18,014	1,077,103	130,651	236,126	20,368	384,310	799,819	74.3	277,284	42,074	290,928	26,288
	8 mos.	230	1,048,485	18,014	1,077,103	130,651	268,571	20,368	389,108	837,142	77.7	239,961	54,037	631,444	206,756
Central Vermont	Aug.	422	657,471	135,000	845,183	132,765	112,821	11,042	358,055	645,486	76.4	199,697	43,393	106,243	19,075
	8 mos.	422	4,159,451	683,000	5,254,383	894,078	928,824	86,413	2,797,443	4,974,855	94.7	279,528	355,422	—486,887	39,772
Chesapeake & Ohio	Aug.	3,102	18,497,976	1,183,393	20,496,347	2,333,164	3,238,503	290,409	6,270,919	12,739,468	62.2	7,756,879	3,190,725	4,930,933	2,718,310
	8 mos.	3,091	109,735,850	10,305,621	124,770,515	17,249,363	23,264,620	2,451,338	42,147,651	90,148,598	72.3	34,621,917	17,678,754	20,343,725	21,307,830
Chicago & Eastern Illinois	Aug.	910	1,696,077	428,303	2,303,029	362,511	444,653	75,346	992,115	1,987,576	86.3	315,453	139,000	46,541	218,476
	8 mos.	910	11,247,537	3,189,809	16,007,289	2,669,368	3,508,210	621,559	7,477,348	15,203,885	95.0	803,404	1,090,000	—1,302,011	1,963,477
Chicago & Illinois Midland	Aug.	131	636,692	1,163	676,235	73,696	143,299	21,350	195,960	461,553	68.3	214,682	90,901	112,061	68,989
	8 mos.	131	3,610,774	7,283	3,804,322	414,820	869,372	199,440	1,258,950	2,972,141	78.1	832,181	402,233	421,772	629,397
Chicago & North Western	Aug.	8,065	10,979,875	3,079,032	15,671,853	2,018,809	2,468,193	270,910	6,374,378	11,806,693	75.3	3,865,160	920,167	2,450,943	1,971,377
	8 mos.	8,065	68,879,516	23,737,231	104,061,752	17,015,393	20,614,566	2,090,218	46,294,159	91,008,806	87.5	13,058,946	7,216,380	3,717,989	15,119,577
Chicago, Burlington & Quincy	Aug.	8,868	14,358,789	2,452,982	18,446,668	2,975,308	2,456,101	330,145	5,827,997	12,228,988	66.3	6,217,680	2,763,602	3,193,191	3,569,716
	8. mos.	8,865	96,612,134	20,426,607	129,878,076	20,708,703	17,947,744	2,712,326	45,047,344	91,473,752	70.4	38,404,324	17,520,532	18,176,723	22,468,581
Chicago Great Western	Aug.	1,500	2,078,170	144,744	2,420,936	365,869	348,709	73,815	1,122,173	1,998,577	82.3	422,359	*9,516	228,876	212,136
	8 mos.	1,500	14,310,434	1,500,374	17,497,423	3,220,297	2,720,161	575,719	8,496,688	15,655,503	89.5	1,841,920	725,248	—347,466	1,883,159
Chicago, Indianapolis & Louisville	Aug.	541	1,015,702	64,421	1,144,079	181,100	196,805	43,370	466,732	961,721	84.0	182,358	68,390	34,186	162,033
	8 mos.	541	6,152,864	364,122	6,894,370	1,115,391	1,435,170	297,937	3,068,307	6,342,242	92.0	552,128	493,275	—516,229	1,457,853

* Credit.

(Tables of Revenues and Expenses continued on next left-hand page)

to replace inadequate motive power

In wartime emergencies the railroads mobilized every locomotive that could be kept in service. But now inadequate motive power cannot cope with steadily increasing demands for service.

Efficiency and economy of operation call for the most modern types of locomotives, like this Nickel Plate Lima-built 2-8-4, capable of handling heavy freights on long runs at sustained high speeds.

LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED INCORPORATED, LIMA, OHIO

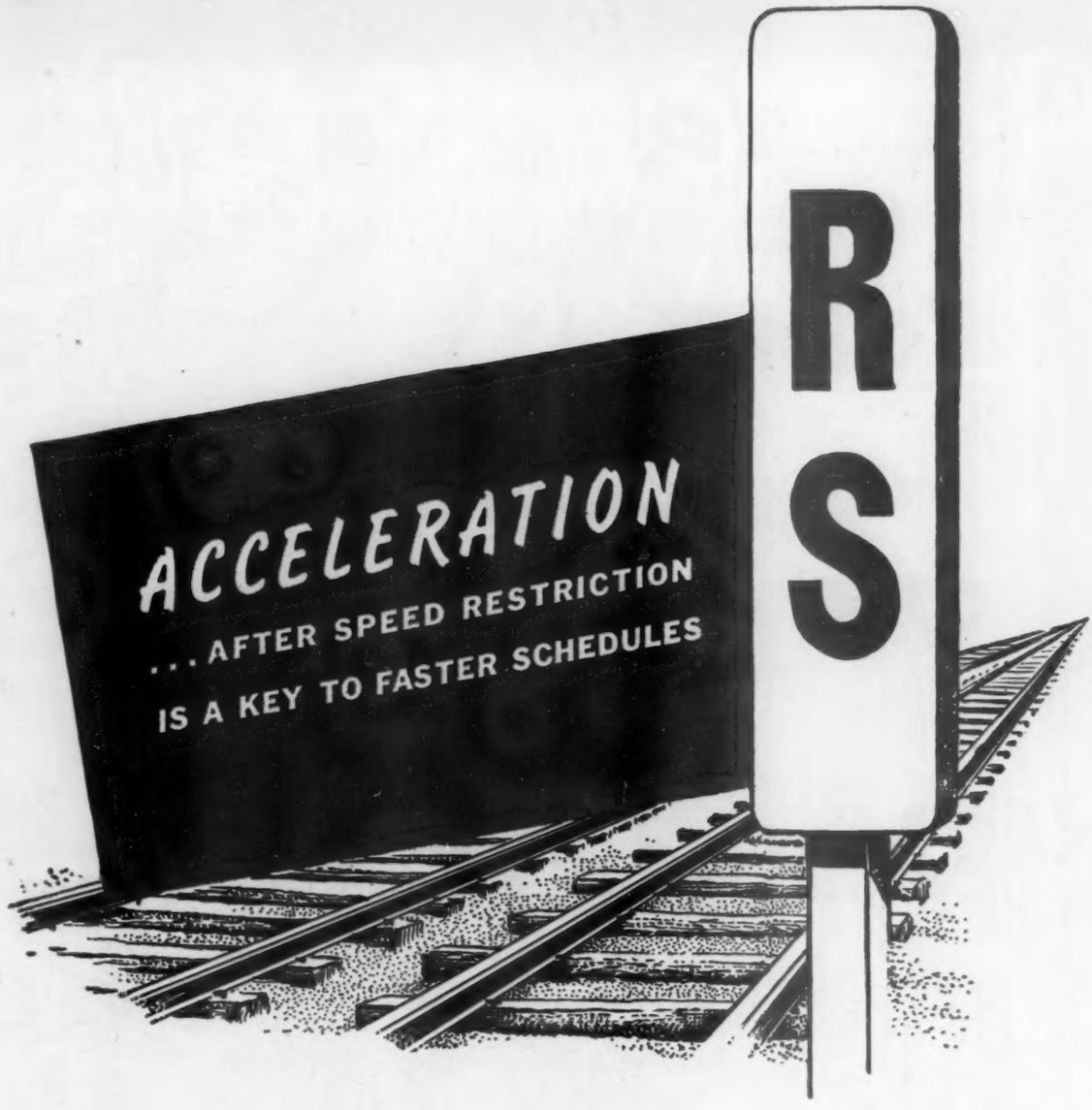
REVENUES AND EXPENSES OF RAILWAYS

MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1946—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of—Way and structures	Maintenance of—Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income: 1946	1945
Chicago, Milwaukee, St. Paul & Pacific	Aug.	10,733	$13,993,258	$2,650,928	$18,516,630	$3,137,335	$2,915,087	$361,526	$7,659,926	$14,968,227	80.8	$3,548,403	$1,231,000	$1,968,778	$2,457,473
	8 mos.	10,733	94,840,236	20,356,417	128,721,155	23,190,469	24,925,991	2,668,026	58,369,731	115,843,642	90.0	12,877,513	4,860,000	4,787,929	19,525,892
Chicago, Rock Island & Pacific	Aug.	7,651	10,972,188	2,784,129	14,866,087	2,263,517	2,151,863	399,544	5,161,355	10,635,697	71.5	4,230,390	1,438,629	2,021,595	2,599,580
	8 mos.	7,652	76,766,071	21,209,842	106,475,829	14,829,037	17,548,629	3,143,220	40,812,196	81,700,056	76.7	24,775,773	8,297,371	11,049,555	19,485,260
Chicago, St. Paul, Minn. & Omaha	Aug.	1,616	1,959,392	366,968	2,562,753	271,912	312,272	45,897	1,147,582	1,876,041	73.2	686,712	164,506	356,139	403,775
	8 mos.	1,616	13,209,834	2,303,251	17,302,040	2,869,002	3,044,605	382,309	8,992,339	16,073,765	92.9	1,228,275	1,284,989	—1,092,784	2,493,055
Clinchfield	Aug.	302	1,254,634	10,560	1,278,408	114,113	207,270	26,474	374,961	746,478	58.4	531,930	123,827	483,527	348,168
	8 mos.	302	8,353,951	69,359	8,509,828	861,817	1,440,808	207,762	2,406,117	5,113,589	60.1	3,396,239	1,086,671	2,626,332	3,793,634
Colorado & Southern	Aug.	748	852,088	147,716	1,100,872	153,230	154,346	21,515	451,074	831,850	75.6	269,022	113,992	134,682	44,870
	8 mos.	748	4,974,172	1,363,581	7,062,597	1,301,372	1,275,603	166,008	3,033,493	6,173,719	87.4	888,878	568,273	232,529	1,561,054
Ft. Worth & Denver City	Aug.	902	707,023	241,990	1,048,424	199,443	171,599	33,615	409,359	883,279	84.2	165,145	52,474	69,421	644,085
	8 mos.	902	5,249,996	1,918,304	7,927,462	1,712,229	1,301,715	256,912	2,902,355	6,690,410	84.4	1,237,052	452,715	558,175	1,573,755
Colorado & Wyoming	Aug.	42	86,712	.....	133,879	10,079	17,379	753	54,700	88,769	66.3	45,110	29,576	16,767	18,796
	8 mos.	42	505,033	.....	833,013	72,624	116,671	6,253	342,979	585,705	70.3	247,308	67,526	168,783	154,842
Columbus & Greenville	Aug.	168	136,487	7,022	152,402	27,528	24,181	4,999	59,728	132,644	87.0	19,758	9,834	7,450	—15,979
	8 mos.	168	1,000,033	46,754	1,115,172	236,746	167,262	39,851	411,563	974,687	87.4	140,485	91,073	46,325	37,948
Delaware & Hudson	Aug.	846	3,860,578	256,473	4,234,904	639,611	925,796	52,325	1,636,140	3,393,035	80.1	841,869	240,652	600,157	328,814
	8 mos.	846	25,931,889	1,311,775	28,011,629	4,309,723	6,467,264	447,813	12,022,530	24,353,710	86.9	3,657,919	1,827,833	1,955,925	3,335,321
Delaware, Lackawanna & Western	Aug.	973	4,793,213	980,332	6,275,074	807,702	1,005,011	119,538	2,900,611	5,033,952	80.2	1,241,122	527,920	614,339	668,098
	8 mos.	973	33,673,796	7,065,717	44,788,218	5,855,471	7,925,337	996,764	22,525,189	38,953,359	87.0	5,834,859	3,171,781	2,323,975	3,443,580
Denver & Rio Grande Western	Aug.	2,386	3,987,852	597,107	4,798,989	710,919	962,289	110,874	1,914,301	3,918,580	81.7	880,409	326,317	515,220	286,305
	8 mos.	2,386	25,389,154	5,992,740	33,148,495	4,570,619	7,868,968	934,086	13,462,186	28,580,676	86.2	4,567,819	2,484,710	1,982,442	8,688,650
Denver & Salt Lake	Aug.	232	278,542	9,368	302,867	54,740	55,983	4,169	103,308	231,989	76.5	70,878	32,848	85,595	38,152
	8 mos.	232	1,947,160	60,395	2,100,519	449,245	447,764	31,697	816,028	1,851,431	88.1	249,088	259,130	349,118	572,870
Detroit & Mackinac	Aug.	230	129,260	4,685	142,008	18,178	11,453	959	40,975	77,418	54.5	64,590	4,991	49,818	19,497
	8 mos.	230	773,688	30,435	855,646	173,039	111,418	6,251	306,148	638,142	74.6	217,504	39,764	113,706	28,548
Detroit & Toledo Shore Line	Aug.	50	391,522	.....	395,491	45,457	29,669	11,756	124,613	221,046	55.9	174,445	52,989	55,847	40,803
	8 mos.	50	2,687,446	.....	2,702,177	291,890	240,827	84,841	937,805	1,630,126	60.3	1,072,051	320,446	271,654	431,823
Detroit, Toledo & Ironton	Aug.	464	927,777	1,428	967,010	104,995	149,349	17,139	267,192	566,282	58.6	400,728	119,509	243,514	56,697
	8 mos.	464	5,908,584	9,342	6,219,807	834,450	1,243,945	139,085	1,928,705	4,370,480	70.3	1,849,327	575,752	993,175	1,248,808
Duluth, Missabe & Iron Range	Aug.	546	4,569,802	6,302	5,356,265	382,178	398,307	5,917	1,089,140	1,924,932	35.9	3,431,333	1,387,445	2,054,103	2,010,292
	8 mos.	546	17,054,844	33,086	19,896,938	3,222,893	3,032,021	48,624	5,243,327	11,938,156	60.6	7,958,782	3,655,860	4,315,978	7,418,614
Duluth, Winnipeg & Pacific	Aug.	175	225,000	4,100	236,900	66,236	35,594	2,916	105,146	214,677	90.6	22,223	18,849	—14,988	—21,368
	8 mos.	175	1,648,000	16,800	1,703,400	431,358	278,535	22,210	788,607	1,558,196	91.5	145,204	143,777	—206,070	30,907
Elgin, Joliet & Eastern	Aug.	391	2,167,705	1	2,702,817	199,362	433,733	21,091	1,123,390	1,862,176	68.9	840,641	218,006	462,154	—97,432
	8 mos.	392	13,450,083	208	16,341,285	2,079,882	3,332,878	161,908	7,658,427	13,860,094	84.8	2,481,191	1,277,053	354,645	2,269,131
Erie	Aug.	2,242	10,577,403	808,222	12,185,056	1,399,021	2,160,228	269,927	5,515,185	9,910,178	81.3	2,274,878	357,451	1,322,971	1,093,207
	8 mos.	2,242	69,381,702	6,636,367	81,299,991	9,344,815	16,271,793	2,029,042	40,388,770	72,480,647	89.2	8,819,344	4,333,339	—42,660	11,038,718
Florida East Coast	Aug.	682	979,258	516,620	1,633,338	360,073	386,479	66,570	759,379	1,700,445	104.1	—67,107	79,480	—195,969	279,077
	8 mos.	682	10,976,720	5,456,618	17,877,100	2,619,922	2,905,359	459,294	6,730,050	13,834,161	77.4	4,042,939	1,064,465	2,166,892	3,610,612
Georgia Railroad	Aug.	328	514,743	92,072	650,228	96,769	150,542	25,111	360,494	656,985	101.0	—6,757	38,924	—46,076	235,195
	8 mos.	328	4,154,477	699,774	5,163,258	755,136	1,052,386	203,882	2,648,858	4,857,748	94.1	305,510	302,840	48,733	1,482,990
Georgia & Florida	Aug.	408	258,591	4,620	269,538	64,055	28,906	12,834	106,849	220,654	81.9	48,884	13,004	16,619	—26,771
	8 mos.	408	1,564,373	26,194	1,631,478	432,944	219,156	94,390	650,801	1,460,503	89.5	170,975	97,745	—34,167	19,770
Grand Trunk Western	Aug.	972	2,751,000	224,000	3,177,000	585,564	634,027	446,403	1,593,181	2,983,230	93.9	193,770	196,048	—157,828	350,324
	8 mos.	999	18,361,000	1,981,000	21,839,000	4,224,541	4,556,471	364,061	11,587,984	21,720,576	99.5	118,424	1,129,390	—1,782,036	3,204,030
Canadian Nat'l Lines in New England	Aug.	172	152,000	20,700	182,700	61,429	30,882	2,227	101,268	199,566	109.2	—16,866	24,814	—76,001	—91,439
	8 mos.	172	1,142,100	100,400	1,425,000	451,069	305,844	18,176	870,327	1,760,193	123.5	—335,193	179,924	—809,297	—547,215
Great Northern	Aug.	8,332	12,743,251	1,706,122	15,922,870	2,558,710	2,593,977	295,908	5,277,225	11,295,767	70.9	4,627,103	926,637	3,692,610	4,489,914
	8 mos.	8,332	82,635,448	11,606,620	103,319,170	20,007,373	19,768,122	2,261,834	38,584,801	84,769,049	82.0	18,550,121	8,952,983	9,090,430	21,424,451
Green Bay & Western	Aug.	234	216,802	585	224,093	56,208	30,770	11,101	81,725	190,507	85.01	33,586	20,138	4,331	11,204
	8 mos.	234	1,686,528	3,677	1,733,135	414,049	190,469	91,122	683,460	1,469,009	84.76	264,126	193,145	—1,127	63,689

* Credit.

(Tables of Revenues and Expenses continued on next left-hand page)



The ability of a locomotive to regain speed after slow-downs is an important factor in schedule making.

Locomotives equipped with the Franklin System of Steam Distribution are making outstanding records in this respect. Their increased horsepower, particularly above 30 mph, is permitting the speeding up of schedules and the making of difficult schedules under adverse weather or operating conditions.

Under road tests, for example, a 4-6-2 Franklin-equipped poppet-valve locomotive demonstrated its ability to accelerate a 1000-ton train on level track from 40 to 75 mph in 6¼ minutes. A similar piston-valve locomotive required 11 minutes — or almost five minutes more. Franklin-equipped Pennsylvania T-1 Class locomotives are capable of taking a 1000-ton train from 30 to 100 mph in 8 minutes.

Application of the Franklin System of Steam Distribution is practical for either new or existing locomotives — for either freight or passenger service. May we show you what it will accomplish with your own motive power?

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK • CHICAGO • MONTREAL

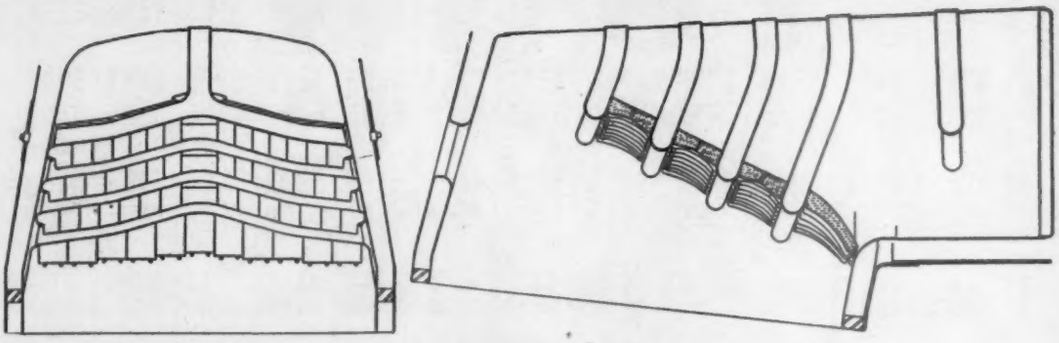
STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS
AUTOMATIC FIRE DOORS • DRIVING BOX LUBRICATORS • STEAM GRATE SHAKERS • FLEXIBLE JOINTS • CAR CONNECTION

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1946—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income: 1946	1945
Gulf, Mobile & Ohio	Aug.	1,945	$2,791,283	$169,317	$3,056,711	$588,500	$530,250	$108,892	$1,021,481	$2,397,019	78.4	$659,692	$281,372	$226,061	$306,254
	8 mos.	1,945	20,966,171	1,295,719	23,043,600	4,566,494	4,343,023	829,301	8,344,753	19,258,092	83.6	3,785,508	1,631,742	876,271	2,839,165
Illinois Central R. R. Co. (System)	Aug.	6,582	14,958,079	2,627,087	18,785,293	3,327,727	3,207,587	334,486	6,844,162	14,615,984	77.8	4,169,309	2,105,702	1,854,495	2,409,163
	8 mos.	6,599	105,052,624	21,591,172	135,870,056	24,429,069	23,682,298	2,573,196	52,929,252	110,836,766	81.6	25,033,290	13,356,611	10,158,170	20,409,991
Illinois Terminal	Aug.	476	635,013	158,706	887,362	125,491	106,532	25,195	341,996	632,485	71.28	254,877	110,227	108,314	102,499
	8 mos.	476	4,275,365	1,163,568	6,041,936	932,252	875,139	190,186	2,473,915	4,724,157	78.19	1,317,779	622,715	505,826	934,523
Kansas City Southern	Aug.	890	2,380,478	189,479	2,774,461	298,103	357,183	65,201	942,349	1,772,741	63.9	1,001,720	343,000	493,681	497,884
	8 mos.	890	16,325,921	1,877,528	19,720,944	2,024,553	2,729,487	554,022	6,783,389	13,021,422	66.0	6,699,522	2,224,000	3,417,086	4,059,615
Kansas, Oklahoma & Gulf	Aug.	328	308,697	1,802	313,446	53,132	27,872	12,941	88,940	197,693	63.1	115,753	35,662	52,702	75,817
	8 mos.	328	2,422,920	12,609	2,461,404	348,967	196,923	104,444	695,077	1,456,038	59.2	1,005,366	348,115	450,256	714,802
Lake Superior & Ishpeming	Aug.	156	281,149	94	352,978	42,374	33,273	1,002	75,056	159,764	45.3	193,214	52,636	148,017	120,613
	8 mos.	156	1,071,752	725	1,295,489	328,426	314,151	6,486	283,728	1,098,897	84.9	196,592	215,662	26,009	466,942
Lehigh & Hudson River	Aug.	96	259,985	.....	260,608	50,247	33,810	6,525	81,392	178,763	68.6	81,845	31,673	34,352	19,866
	8 mos.	96	1,743,468	.....	1,747,672	319,991	265,906	49,772	609,242	1,303,725	74.6	443,947	186,932	133,900	192,281
Lehigh & New England	Aug.	189	632,044	.....	638,452	74,980	95,765	9,586	205,030	407,163	63.8	231,289	107,019	136,580	85,567
	8 mos.	190	4,235,272	.....	4,275,916	515,834	781,501	79,749	1,526,366	3,083,308	72.1	1,192,608	588,478	715,815	558,346
Lehigh Valley	Aug.	1,254	5,268,748	507,839	6,212,059	900,467	919,833	124,974	2,688,319	4,854,097	78.1	1,357,962	433,460	773,523	295,891
	8 mos.	1,254	35,820,524	4,522,618	43,456,695	5,873,555	6,237,862	1,028,408	21,024,549	85,993,170	82.8	7,463,525	3,365,677	2,762,002	3,206,462
Louisiana & Arkansas	Aug.	756	1,097,800	70,069	1,213,744	141,460	135,306	34,904	392,921	747,231	61.6	466,513	191,468	210,471	186,451
	8 mos.	756	7,604,493	770,656	8,710,810	1,132,807	1,179,193	292,761	2,924,085	5,887,135	67.6	2,823,675	981,296	1,311,787	1,846,100
Louisville & Nashville	Aug.	4,759	12,708,172	2,254,443	15,824,723	2,093,029	3,072,784	251,980	6,287,461	12,271,293	77.5	3,553,430	2,046,069	1,996,272	1,884,780
	8 mos.	4,758	86,781,941	17,420,095	111,100,604	15,854,824	23,791,905	2,049,963	46,855,561	93,083,354	83.8	18,017,250	11,633,033	9,450,680	16,935,083
Maine Central	Aug.	988	1,399,073	328,508	1,837,985	327,376	324,209	14,775	720,077	1,444,166	78.6	393,819	168,625	172,745	167,976
	8 mos.	988	11,084,029	1,898,771	13,781,691	2,447,988	2,508,504	128,173	5,882,097	11,426,224	82.9	2,355,467	982,098	816,175	1,251,479
Midland Valley	Aug.	334	148,255	22	151,398	43,445	17,044	2,858	51,851	121,312	80.1	30,086	12,541	7,132	20,801
	8 mos.	334	1,046,782	185	1,065,169	245,670	125,267	24,043	397,605	841,797	79.0	223,372	93,071	64,323	195,429
Minneapolis & St. Louis	Aug.	1,408	1,276,063	31,300	1,361,530	273,099	196,465	87,341	470,754	1,099,029	80.7	262,501	127,730	93,654	142,818
	8 mos.	1,408	8,407,841	255,564	9,072,584	2,203,685	1,619,472	690,402	3,668,163	8,769,165	96.7	303,419	397,682	—244,039	1,031,797
Minneapolis, St. Paul & S. S. Marie	Aug.	3,224	2,138,656	226,475	2,562,182	534,212	429,492	51,026	1,122,625	2,240,329	87.4	321,853	190,026	122,977	268,308
	8 mos.	3,224	14,354,817	1,180,812	16,832,656	3,766,824	3,211,804	376,058	8,185,151	16,235,280	96.5	597,376	1,361,268	—733,550	1,657,104
Duluth, South Shore & Atlantic	Aug.	530	319,082	24,646	377,443	83,169	60,657	14,263	163,004	330,930	87.7	46,513	22,417	14,832	55,821
	8 mos.	530	2,382,700	118,671	2,696,433	583,738	519,967	107,632	1,228,563	2,516,866	93.3	179,567	168,848	—69,093	401,112
Spokane International	Aug.	152	151,880	1,904	163,783	26,765	16,814	3,301	51,847	105,635	64.5	58,148	33,966	13,392	16,553
	8 mos.	152	918,458	22,152	1,002,646	234,627	129,921	25,220	359,076	804,327	80.2	198,319	50,178	84,713	182,977
Mississippi Central	Aug.	148	38,983	244	41,321	15,760	10,969	8,317	17,705	58,765	142.2	—17,444	5,471	—28,012	23,497
	8 mos.	156	838,485	33,965	896,409	208,776	119,117	74,892	259,954	719,166	80.2	177,243	54,687	34,566	190,687
Missouri & Arkansas	Aug.	365	136,225	2,409	148,214	37,862	20,097	7,788	67,204	139,262	94.0	8,952	8,737	—15,250	—15,953
	8 mos.	365	1,113,219	16,860	1,206,979	329,477	182,284	60,020	509,842	1,132,043	93.8	74,936	51,599	—108,368	—270,490
Missouri-Illinois	Aug.	172	341,781	477	346,361	60,449	38,533	4,384	94,921	206,365	59.6	139,996	57,309	67,291	32,291
	8 mos.	172	2,208,215	3,533	2,229,651	369,885	276,492	38,584	658,588	1,402,932	62.9	826,719	371,864	389,859	291,547
Missouri-Kansas-Texas Lines	Aug.	3,253	4,104,244	637,303	5,198,987	1,043,189	866,326	184,532	2,054,267	4,410,136	84.8	788,851	332,721	262,169	788,724
	8 mos.	3,253	31,570,481	5,507,729	40,701,017	6,877,165	5,979,020	1,566,693	16,028,270	32,581,096	80.0	8,110,921	3,431,698	3,021,100	5,052,467
Missouri Pacific	Aug.	7,080	12,210,277	2,159,287	15,757,935	2,570,537	2,622,624	334,755	5,807,287	11,961,252	75.9	3,796,683	877,345	2,248,740	2,369,328
	8 mos.	7,080	88,768,726	14,599,114	113,087,590	17,208,079	20,566,327	2,774,951	45,281,887	90,650,683	80.2	22,436,907	6,817,174	10,805,122	21,426,795
Gulf Coast Lines	Aug.	1,934	2,324,576	166,066	2,626,730	574,213	353,600	62,886	1,017,200	2,114,283	80.49	512,447	120,666	218,185	226,204
	8 mos.	1,934	23,557,625	1,581,488	26,236,751	4,631,160	2,840,521	521,405	8,295,870	17,064,016	65.04	9,172,735	2,183,353	4,812,841	3,923,484
International-Great Northern	Aug.	1,110	1,602,118	375,628	2,220,809	459,100	364,174	40,558	980,747	1,963,580	88.4	257,229	105,182	3,002	230,580
	8 mos.	1,110	13,312,553	2,621,934	17,842,443	3,731,568	2,835,521	335,983	7,560,661	15,344,334	86.0	2,498,109	842,902	274,503	2,319,333
Monongahela	Aug.	170	562,867	2,873	568,776	75,697	55,943	898	159,901	296,471	52.1	272,305	35,732	147,719	84,302
	8 mos.	170	3,691,456	17,264	3,733,233	517,249	396,539	7,057	1,173,107	2,128,113	57.0	1,605,120	269,981	697,911	752,915

(Tables of Revenues and Expenses continued on next left-hand page)



Typical Installation in Coal-Fired Locomotive

4 REASONS for installing SECURITY CIRCULATORS

1 ***Security Circulators*** furnish unexcelled support for the brick arch in the firebox.

2 ***Security Circulators*** reduce honeycombing and cinder cutting.

3 ***Security Circulators*** improve the circulation within the boiler.

4 ***Security Circulators*** aid in maintaining maximum boiler output.

Any one of these reasons justifies the installation of Security Circulators — *altogether* they mean a decided increase in Locomotive Availability.

AMERICAN ARCH COMPANY, INC.

NEW YORK • CHICAGO

SECURITY CIRCULATOR DIVISION

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1946—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues			Operating expenses					Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income	
						Maintenance of									
			Freight	Passenger	Total (inc. misc.)	Way and structures	Equipment	Traffic	Transportation	Total				1946	1945
Montour	Aug.	51	$302,267	.....	$303,720	$31,796	$75,236	$1,134	$96,361	$208,470	68.6	$95,250	$58,064	$71,080	$65,929
	8 mos.	51	1,623,181	.....	1,632,355	183,890	519,451	10,787	605,603	1,387,545	85.0	244,810	251,048	256,527	474,812
Nashville, Chattanooga & St. Louis	Aug.	1,053	1,899,831	$285,305	2,383,224	508,679	494,528	92,902	1,169,509	2,360,486	99.0	22,738	195,380	—164,293	171,513
	8 mos.	1,053	14,918,749	2,770,461	19,386,003	4,000,941	4,173,742	766,975	8,755,817	18,457,688	95.2	928,315	1,368,805	—476,845	2,773,806
New York Central	Aug.	10,746	40,156,567	14,140,754	59,499,703	8,512,568	11,313,659	880,892	24,767,143	48,108,283	80.9	11,391,420	5,062,865	4,778,941	4,234,875
	8 mos.	10,746	261,562,645	102,153,979	402,326,902	57,264,194	84,487,290	7,001,648	187,635,366	356,417,481	88.6	45,909,421	22,016,103	12,165,295	37,933,923
Pittsburgh & Lake Erie	Aug.	229	2,642,662	121,362	2,853,147	359,400	834,216	56,148	1,087,501	2,468,645	86.5	384,502	569,410	380,158	395,975
	8 mos.	229	15,663,404	782,167	17,141,826	2,766,486	6,441,171	427,070	7,930,730	18,613,347	108.6	—1,471,521	1,332,177	1,905,923	3,251,038
New York, Chicago & St. Louis	Aug.	1,687	6,884,091	187,965	7,234,290	845,501	1,048,212	178,031	2,7 8,785	5,030,973	69.5	2,203,317	—173,876	1,977,974	917,239
	8 mos.	1,687	44,421,855	1,994,356	47,453,493	6,779,470	8,095,162	1,404,137	19,850,891	37,988,526	80.1	9,464,967	1,937,793	5,065,707	12,325,374
New York, New Haven & Hartford	Aug.	1,843	6,832,997	5,465,089	13,324,620	2,226,510	1,938,390	201,955	6,105,953	11,418,726	85.7	1,905,894	115,000	620,513	1,197,963
	8 mos.	1,841	48,836,698	41,325,296	97,961,538	15,743,290	15,445,232	1,723,357	44,597,118	84,586,964	86.3	13,374,574	5,152,500	—677,383	12,578,327
New York Connecting	Aug.	21	182,634	.....	186,501	59,216	14,185	.....	57,963	133,587	71.6	52,914	33,863	117,903	203,987
	8 mos.	21	1,381,238	.....	1,400,326	453,105	125,069	.....	474,492	1,068,757	76.3	331,569	427,957	697,446	1,323,372
New York, Ontario & Western	Aug.	547	649,951	43,364	748,191	169,851	119,482	26,093	393,182	736,707	98.5	11,484	46,983	—133,578	—3,270
	8 mos.	547	4,149,395	141,874	4,840,933	850,966	901,327	203,860	2,729,053	4,915,026	101.5	—74,093	326,976	—1,009,276	—723,004
New York, Susquehanna & Western	Aug.	120	287,708	39,075	352,795	40,652	42,893	4,499	158,924	263,874	74.8	88,921	9,936	44,252	48,000
	8 mos.	120	2,202,312	321,294	2,632,610	275,805	305,565	38,527	1,212,596	1,975,725	75.1	656,885	278,934	—19,345	454,186
Norfolk & Western	Aug.	2,161	12,112,932	967,475	13,408,621	1,553,632	2,233,905	209,178	3,711,124	8,114,070	60.5	5,294,551	2,828,343	3,244,860	2,076,081
	8 mos.	2,161	74,012,879	8,005,281	84,497,062	11,521,527	17,512,342	1,626,235	26,467,693	60,256,401	71.3	24,240,661	15,328,259	14,908,142	16,632,510
Norfolk Southern	Aug.	727	669,174	13,516	709,269	165,117	89,408	40,493	268,246	600,435	84.7	108,834	41,099	32,997	53,885
	8 mos.	727	4,955,569	110,517	5,239,978	1,327,105	668,878	285,075	2,082,251	4,643,516	[illegible]	596,462	325,644	—26,975	426,786
Northern Pacific	Aug.	6,920	9,204,678	932,700	11,237,207	1,641,617	1,980,904	215,639	3,999,933	8,475,686	75.4	2,761,521	1,086,328	2,086,541	2,944,766
	8 mos.	6,878	61,138,119	10,440,191	79,407,497	14,900,353	16,530,298	1,720,491	31,651,164	69,746,771	87.8	9,660,726	7,405,276	5,506,285	14,756,692
Northwestern Pacific	Aug.	331	564,982	10,108	605,030	123,699	67,959	3,290	306,993	510,376	84.4	94,654	30,898	26,731	103,520
	8 mos.	331	2,856,966	57,862	3,091,787	1,213,413	509,230	28,401	1,660,575	3,482,546	112.6	—390,759	225,043	—815,422	449,912
Oklahoma City-Ada-Atoka	Aug.	132	73,925	.....	75,224	24,242	3,761	1,152	21,907	55,004	73.1	20,220	8,405	3,202	11,183
	8 mos.	132	608,392	23	629,137	171,039	27,505	10,342	187,462	428,028	68.0	201,109	65,364	44,469	121,171
Pennsylvania	Aug.	10,121	54,732,689	17,890,614	78,003,533	9,888,751	17,378,406	1,405,287	36,421,073	68,099,062	87.3	9,904,471	3,909,574	5,483,721	8,494,108
	8 mos.	10,121	345,343,833	144,629,247	531,083,893	67,890,633	126,383,064	10,638,071	213,481,543	493,473,445	92.9	37,610,448	29,683,434	3,462,011	84,660,377
Long Island	Aug.	376	1,329,880	3,075,828	4,609,428	434,247	604,920	96,027	2,107,380	3,320,875	72.0	1,288,553	444,829	532,354	1,066,781
	8 mos.	376	8,740,905	20,429,326	30,679,727	3,401,316	4,429,550	235,832	15,408,549	24,084,025	78.5	6,595,702	3,511,273	752,144	3,070,461
Pennsylvania-Reading Seashore Lines	Aug.	390	474,912	1,063,550	1,577,752	167,102	123,549	9,075	695,494	1,019,205	64.6	558,547	79,324	287,887	431,566
	8 mos.	390	3,328,648	4,027,018	7,591,411	1,340,609	877,566	69,931	4,323,782	6,817,654	89.8	773,757	603,762	—862,694	378,136
Pere Marquette	Aug.	1,950	4,163,075	329,449	4,884,348	628,595	847,553	118,712	2,027,398	3,858,301	79.0	1,026,047	241,830	571,226	265,592
	8 mos.	1,949	27,842,820	1,742,536	31,571,236	5,026,907	6,328,918	803,764	14,184,324	28,048,569	88.8	3,522,667	2,021,893	498,842	4,743,112
Pittsburg & Shawmut	Aug.	97	209,792	.....	210,663	52,514	27,468	2,683	61,495	152,760	72.5	57,903	7,065	37,723	19,150
	8 mos.	97	1,073,797	.....	1,080,721	254,074	198,920	20,577	343,494	871,000	80.6	209,719	39,849	119,739	181,315
Pittsburgh & West Virginia	Aug.	136	469,629	.....	496,896	83,546	104,619	30,721	142,980	392,310	78.9	104,586	29,041	100,266	88,496
	8 mos.	136	2,814,130	43	2,980,586	592,096	703,972	224,648	979,253	2,736,929	91.8	243,657	221,624	225,903	1,033,627
Pittsburg, Shawmut & Northern	Aug.	122	70,264	.....	71,080	14,854	12,182	1,191	24,584	59,991	84.4	11,089	5,041	—2,341	—24,248
	8 mos.	165	551,789	.....	562,444	127,492	106,883	8,628	262,107	571,280	101.6	—8,836	42,572	—123,980	—93,824
Reading	Aug.	1,362	8,162,570	690,234	9,264,691	1,405,226	1,706,586	111,723	3,744,898	7,212,976	77.9	2,051,715	1,000,185	984,394	1,108,786
	8 mos.	1,362	55,510,759	6,961,218	65,606,472	10,686,096	13,560,874	834,560	28,490,473	55,560,806	84.7	10,045,666	5,683,396	4,065,246	9,386,985
Richmond, Fredericksburg & Potomac	Aug.	118	1,228,695	770,411	2,123,292	271,550	282,385	16,415	766,600	1,437,157	67.7	686,135	320,831	311,281	297,252
	8 mos.	118	9,406,897	7,213,742	17,848,159	2,262,518	2,341,957	135,844	6,562,961	12,173,464	68.2	5,674,695	2,641,767	2,121,219	2,196,713
Rutland	Aug.	407	316,355	70,139	461,465	66,510	82,134	13,204	234,590	411,286	89.1	50,179	27,811	11,419	5,330
	8 mos.	407	2,384,675	385,602	3,301,502	533,532	664,582	102,300	1,853,178	3,276,442	99.2	25,060	213,464	—259,428	—41,523
St. Louis-San Francisco	Aug.	4,645	6,565,648	1,136,098	8,355,036	1,165,130	1,655,663	189,961	3,404,573	6,792,535	81.3	1,562,501	552,428	1,074,218	1,330,596
	8 mos.	4,645	45,811,877	9,454,414	60,284,406	10,685,369	13,287,451	1,594,859	26,342,244	54,957,298	91.2	5,327,108	4,277,880	1,677,624	11,598,591
St. Louis, San Francisco & Texas	Aug.	160	302,848	12,518	330,734	45,128	39,979	13,186	152,545	260,354	78.7	70,380	14,096	29,725	27,707
	8 mos.	160	2,141,144	177,203	2,408,723	359,202	314,359	104,287	1,098,024	1,943,383	80.7	465,340	109,535	139,249	261,202

* Credit

(Tables of Revenues and Expenses continued on next left-hand page)

13 Miles

of Tubing in Superheater Design for a steam power plant

Many exacting engineering conditions had to be met for this huge installation.

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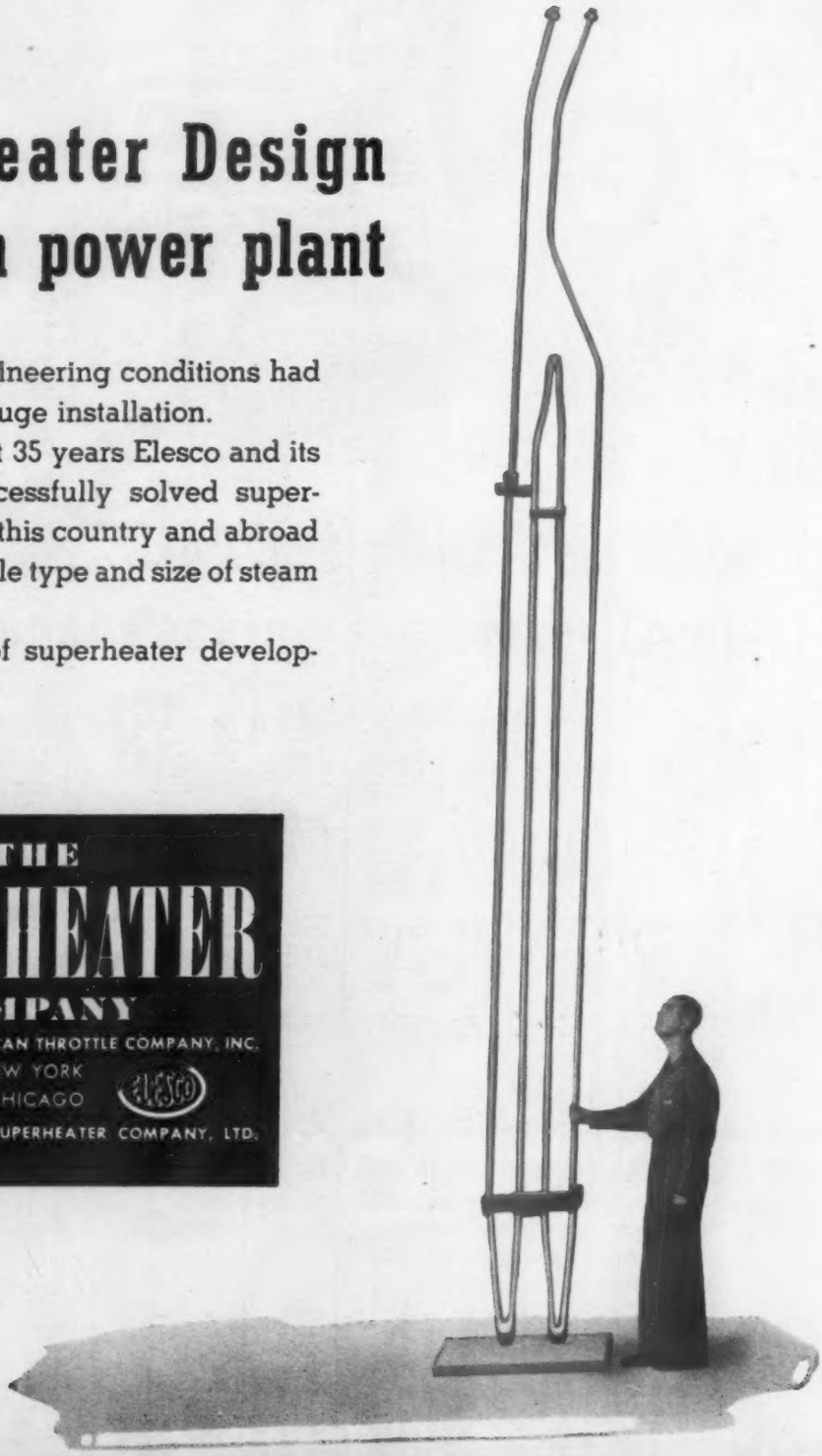

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REVENUES AND EXPENSES OF RAILWAYS

MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1946—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income 1946	Net railway operating income 1945
St. Louis Southwestern Lines	Aug.	1,575	$3,592,517	$154,682	$3,894,438	$636,417	$580,927	$115,309	$1,219,063	$2,712,567	69.7	$1,181,871	$418,412	$626,128	$601,515
	8 mos.	1,575	27,733,426	1,282,801	30,116,899	5,211,654	4,730,295	953,448	9,876,997	21,984,421	73.0	8,132,478	2,762,248	4,153,212	7,105,666
Seaboard Air Line	Aug.	4,150	6,145,150	1,508,825	8,280,125	1,370,874	1,734,939	276,806	3,419,469	7,244,659	87.5	1,035,466	473,200	374,770	1,538,029
	8 mos.	4,150	55,579,451	15,373,442	75,905,626	12,489,661	13,242,187	2,103,978	30,396,136	62,019,285	81.7	13,866,341	3,948,007	7,084,580	12,873,858
Southern Railway	Aug.	6,484	14,752,754	2,973,602	18,939,277	2,902,680	3,470,959	315,762	7,706,635	15,136,757	79.9	3,802,520	1,889,078	1,526,193	1,703,832
	8 mos.	6,484	106,454,312	24,913,857	140,687,651	22,863,517	26,229,969	2,484,909	57,259,479	114,628,757	81.5	26,058,894	11,895,206	10,982,430	20,343,415
Alabama Great Southern	Aug.	315	1,012,001	181,604	1,285,214	197,741	275,171	26,389	510,884	1,079,404	84.0	205,810	132,914	76,762	110,956
	8 mos.	315	6,986,594	1,835,473	9,430,745	1,671,052	2,226,792	207,784	3,696,608	8,258,354	87.6	1,172,391	799,187	271,655	1,126,796
Cinn., New Orleans & Texas Pacific	Aug.	337	2,188,997	308,389	2,647,339	297,482	597,217	44,276	933,645	1,972,622	74.5	674,717	389,969	353,386	323,781
	8 mos.	337	15,321,106	2,805,419	19,281,614	2,432,348	4,449,602	343,738	6,937,315	14,921,234	77.4	4,360,380	2,297,523	2,385,150	3,049,427
Georgia Southern & Florida	Aug.	397	343,660	74,804	458,608	72,006	72,519	5,827	207,676	372,542	81.2	86,066	32,134	22,445	56,606
	8 mos.	397	2,621,794	776,244	3,732,308	724,507	555,696	49,304	1,618,907	3,072,390	82.3	659,918	219,480	185,984	539,639
New Orleans & Northeastern	Aug.	204	633,718	99,396	790,809	128,180	90,587	13,804	256,351	534,752	67.6	256,057	133,362	52,182	76,565
	8 mos.	204	4,166,687	1,010,378	5,523,020	1,151,142	705,270	110,984	1,817,119	4,084,292	74.0	1,438,728	583,816	352,703	832,960
Southern Pacific	Aug.	8,245	26,306,601	5,977,242	35,246,682	4,521,116	6,549,865	713,001	15,482,038	29,543,686	83.8	5,702,996	1,528,156	2,541,848	3,462,241
	8 mos.	8,246	181,897,564	51,215,303	255,883,916	39,102,614	53,677,107	5,902,131	110,686,887	228,013,006	89.1	27,870,910	1,481,135	16,004,245	25,203,774
Texas & New Orleans	Aug.	4,322	6,690,320	1,427,595	8,728,811	1,475,100	1,451,110	192,077	3,514,388	7,087,612	81.2	1,641,199	*23,420	1,209,984	1,023,557
	8 mos.	4,322	51,519,095	11,817,101	68,017,648	12,450,769	11,312,257	1,507,011	25,978,332	54,759,493	80.5	13,258,155	749,949	8,939,755	9,340,224
Spokane, Portland & Seattle	Aug.	944	1,430,447	78,977	1,601,592	374,250	183,917	15,457	637,518	1,282,457	80.1	319,135	—43,831	292,273	657,732
	8 mos.	944	10,347,918	863,993	12,020,056	3,737,236	1,520,491	134,267	4,761,274	10,717,167	89.2	1,302,889	358,457	197,184	2,935,562
Tennessee Central	Aug.	286	306,926	14,122	341,583	74,463	62,761	7,371	156,744	316,493	92.7	25,090	29,671	—21,690	17,496
	8 mos.	286	2,080,930	136,290	2,351,896	441,294	436,327	55,553	1,042,432	2,095,669	89.1	256,227	207,118	—80,401	194,088
Texas & Pacific	Aug.	1,873	3,371,999	842,574	4,680,744	693,775	742,840	146,868	1,721,445	3,602,359	77.0	1,078,385	320,097	569,423	995,233
	8 mos.	1,873	26,156,518	7,568,271	37,318,211	5,683,699	5,692,597	1,105,851	13,064,673	27,908,971	74.8	9,409,240	2,992,752	5,173,845	6,671,948
Texas Mexican	Aug.	162	162,556	225	192,254	29,937	21,913	4,960	58,717	126,917	66.0	65,337	18,468	26,401	35,664
	8 mos.	162	1,462,729	2,463	1,646,073	394,150	171,991	38,453	506,425	1,199,868	72.9	446,205	157,262	166,039	241,997
Toledo, Peoria & Western	Aug.														
	8 mos.														
Union Pacific System	Aug.	9,775	26,150,509	5,840,236	34,815,591	4,299,615	6,113,094	590,262	13,282,654	26,249,925	75.4	8,565,666	3,742,705	3,302,753	3,485,548
	8 mos.	9,776	164,858,844	46,747,521	233,107,680	31,353,259	45,552,410	5,162,980	89,387,139	186,837,104	80.2	46,270,576	22,604,925	16,802,557	28,277,174
Utah	Aug.	111	150,321	.....	150,669	23,717	40,667	608	56,010	126,073	83.7	24,596	11,663	16,397	15,021
	8 mos.	111	982,608	.....	963,689	173,919	290,466	5,514	363,807	875,512	89.0	108,177	92,492	40,413	107,995
Virginian	Aug.	661	2,598,189	9,988	2,688,660	294,757	604,876	31,274	644,815	1,639,705	61.0	1,048,955	537,000	696,974	527,776
	8 mos.	661	16,490,966	64,257	17,027,441	2,168,803	4,727,362	253,514	4,256,713	11,920,444	70.0	5,106,997	2,787,900	3,339,664	5,616,919
Wabash	Aug.	2,393	6,155,688	709,225	7,303,821	1,165,275	1,040,299	215,466	3,055,586	5,784,127	79.2	1,519,694	493,212	579,561	595,102
	8 mos.	2,393	43,047,878	5,386,236	51,817,591	8,268,488	8,021,900	1,647,874	22,556,268	42,828,931	82.7	8,988,660	1,935,649	4,115,156	6,217,570
Ann Arbor	Aug.	294	413,553	11,343	457,149	85,232	97,691	19,590	212,478	431,058	94.3	26,091	34,219	—15,865	57,164
	8 mos.	294	3,698,622	58,062	3,908,246	566,950	771,946	153,888	1,902,164	3,512,490	89.9	395,756	238,854	63,643	501,223
Western Maryland	Aug.	839	3,003,122	30,268	3,164,766	438,662	581,244	56,560	1,013,433	2,199,888	69.5	964,878	465,000	543,340	463,291
	8 mos.	839	19,456,388	290,101	20,650,006	2,788,098	4,028,007	470,156	7,087,415	15,287,893	74.0	5,362,113	2,546,000	3,171,313	4,320,292
Western Pacific	Aug.	1,195	2,975,191	492,558	3,601,099	510,679	563,889	119,750	1,299,409	2,678,791	74.4	922,308	438,644	400,266	363,350
	8 mos.	1,195	21,040,779	5,040,031	27,096,420	4,238,007	4,594,704	913,697	10,243,391	21,434,203	79.1	5,662,217	2,453,913	2,538,186	4,440,060
Wheeling & Lake Erie	Aug.	505	2,220,764	.....	2,354,897	298,070	333,494	48,660	751,722	1,487,871	63.2	867,026	469,142	528,861	261,901
	8 mos.	505	12,626,059	15	13,161,534	2,013,897	2,664,381	396,290	4,941,282	10,491,056	79.7	2,670,478	2,156,730	1,872,201	2,359,327
Wisconsin Central	Aug.	1,051	1,841,082	120,823	2,152,501	140,378	309,728	52,375	873,694	1,448,103	67.3	704,398	*74,403	724,978	103,354
	8 mos.	1,051	12,701,636	798,945	14,830,542	1,934,303	2,336,081	380,511	6,791,743	11,998,879	80.9	2,831,663	553,131	1,377,205	1,869,134

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News Department

(Continued from page 613)

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings:

ALLIED RAILWAY SUPPLY ASSOCIATION.—J. F. Gettrust, P. O. Box 5522, Chicago 80, Ill.

AMERICAN ASSOCIATION OF BAGGAGE TRAFFIC MANAGERS.—E. P. Soebbing, 1450 Railway Exchange Bldg., St. Louis 1, Mo.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, C. R. R. of N. J., 143 Liberty St., New York 6, N. Y.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill.

AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.—E. A. Abbott, 1103 Cleveland St., Evanston, Ill.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September, 1947.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York 6, N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—W. J. Walsh, B. & O. R. R., Baltimore 1, Md.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 18-20, 1947, Palmer House, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—Virginia Tanner, Baltimore & Ohio Magazine, Room 1202, B. & O. Bldg., Baltimore 1, Md.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—J. P. Nye, Tower Bldg., Washington 5, D. C.

AMERICAN SOCIETY FOR TESTING MATERIALS.—R. J. Painter, Asst. Secretary, 1916 Race St., Philadelphia 3, Pa. Annual meeting, June 16-20, 1947, Chalfonte-Hadden Hall, Atlantic City, N. J.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York 18, N. Y. Annual meeting, December 2-6, 1946, New York, N. Y.

Railroad Division.—E. L. Woodward, Railway Mechanical Engineer, 105 W. Adams St., Chicago 3, Ill.

AMERICAN TRANSIT ASSOCIATION.—A. W. Baker, 292 Madison Ave., New York 17, N. Y.

AMERICAN WOOD-PRESERVERS' ASSOCIATION.—H. L. Dawson, 1427 Eye St., N. W., Washington 5, D. C. Annual meeting, April 22-24, 1947, Multnomah Hotel, Portland, Ore.

ASSOCIATED TRAFFIC CLUBS OF AMERICA, INC.—R. A. Ellison, Cincinnati Chamber of Commerce, 1203 C. of C. Bldg., Cincinnati 2, O.

ASSOCIATION OF AMERICAN RAILROAD DINING CAR OFFICERS.—H. S. Whited, 5th & T Sts., N. E., Washington 2, D. C.

ASSOCIATION OF AMERICAN RAILROADS.—H. J. Forster, Transportation Bldg., Washington 6, D. C.

Operations and Maintenance Department.—Clark Hungerford, Vice-President, Transportation Bldg., Washington 6, D. C.

Operating-Transportation Division.—L. R. Knott, 59 E. Van Buren St., Chicago 5, Ill.

Operating Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.

Transportation Section.—H. A. Eaton, 59 E. Van Buren St., Chicago 5, Ill.

Communications Section.—W. A. Fairbanks, 30 Vesey St., New York 7, N. Y. Annual meeting, November 19-21, 1946, Hotel Statler, Detroit, Mich.

Fire Protection and Insurance Section.—W. F. Steffens, New York Central, Room 3317, 230 Park Avenue, New York 17, N. Y. Annual meeting, October 22-23, 1946, Hotel Sherman, Chicago, Ill.

Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill.

Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y. Annual meeting, October 28, 1946, Hotel Sherman, Chicago, Ill.

Protective Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.

Safety Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.

Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 18-20, 1947, Palmer House, Chicago, Ill.

Construction and Maintenance Section.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 18-20, 1947, Palmer House, Chicago, Ill.

Electrical Section.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, October 22, 1946, Hotel Sherman, Chicago, Ill.

Signal Section.—R. H. C. Balliet, 30 Vesey St., New York 7, N. Y. Anual meeting, October 14-16, 1946, New Ocean House, Swampscott, Mass.

Mechanical Division.—Arthur C. Browning, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, June, 1947, Convention Hall, Atlantic City, N. J.

Electrical Section.—J. A. Andreucetti, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, October 23-25, 1946, Hotel Sherman, Chicago, Ill.

Purchases and Stores Division.—W. J. Farrell (Executive Vice-Chairman), Transportation Bldg., Washington 6, D. C. Annual meeting, June, 1947, Convention Hall, Atlantic City, N. J.

Freight Claim Division.—Lewis Pilcher, 59 E. Van Buren St., Chicago 5, Ill.

Motor Transport Division.—George M. Campbell Transportation Bldg., Washington 6, D. C.

Car Service Division.—E. W. Coughlin, (Assistant to Chairman), Transportation Bldg., Washington 6, D. C.

Finance, Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Bldg., Washington 6, D. C.

Accounting Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C.

Treasury Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C.

Traffic Department.—A. F. Cleveland, Vice-President, Transportation Bldg., Washington 6, D. C.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Alton R. R., 340 W. Harrison St., Chicago 7, Ill.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—E. C. Gunther, Duff-Norton Mfg. Co., 122 S. Michigan Ave., Chicago 3, Ill.

CANADIAN RAILWAY CLUB.—C. R. Crook, 4415 Marcil Ave., N. D. G., Montreal 28, Que. Regular meetings second Monday of each month, except June, July and August, Mount Royal Hotel, Montreal, Que.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS.—J. J. Sheehan, 1101 Missouri Pacific Bldg., St. Louis 3, Mo. Regular meetings, third Tuesday of each month, except June, July and August, Hotel De Soto, St. Louis, Mo.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—F. H. Stremmel, 6536 Oxford Ave., Chicago 31, Ill.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—Ralph J. Feddor, 2803 N. Campbell Ave., Chicago 18, Ill. Regular meetings, second Monday of each month, except June, July and August.

CENTRAL RAILWAY CLUB OF BUFFALO.—R. E. Mann, 1840-42 Hotel Statler, McKinley Square, Buffalo 5, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—H. J. Hawthorne, Union Railroad, East Pittsburgh, Pa.

EASTERN CAR FOREMAN'S ASSOCIATION.—W. P. Dizard, 30 Church St., New York 7, N. Y. Regular meetings, second Friday of January, February (Annual Dinner), March, April, May, October and November, 29 W. 39th St., New York, N. Y.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker Street, North Little Rock, Ark.

MASTER BOILER MAKERS' ASSOCIATION.—A. F. Stiglmeier, 29 Parkwood St., Albany 3, N. Y.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Ben Smart, 7413 New Post Office Bldg., Washington 25, D. C. Annual meeting, November 12-15, 1946, Hotel Biltmore, Los Angeles, Cal.

NATIONAL ASSOCIATION OF SHIPPERS' ADVISORY BOARDS.—W. B. Shepherd, Aluminum Company of America, Gulf Bldg., Pittsburgh 19, Pa. Annual meeting, October 21-22, 1946, Jefferson Hotel, St. Louis, Mo.

NATIONAL INDUSTRIAL TRAFFIC LEAGUE.—Edward F. Lacey, Suite 450, Munsey Bldg., Washington 4, D. C. Annual meeting, November 21-22, 1946, Hotel Pennsylvania, New York, N. Y.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. H. White, Room 1826, 208 S. La Salle St., Chicago 4, Ill. Meeting and exhibit, March 17-20, 1947, The Coliseum, Chicago, Ill.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston 11, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Hotel Vendome, Boston, Mass.

NEW YORK RAILROAD CLUB.—D. W. Pye, 30 Church St., New York 7, N. Y. Regular meetings, third Thursday of each month, except June, July, August, September and December, 29 W. 39th St., New York, N. Y.

NORTHWEST CARMEN'S ASSOCIATION.—E. N. Myers, Minnesota Transfer Ry., 1434 Iowa Ave., St. Paul 4, Minn. Regular meetings, first Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul, Minn.

PACIFIC RAILWAY CLUB.—William S. Wollner, P. O. Box 458, San Rafael, Cal. Regular meetings, second Thursday of each alternate month at Palace Hotel, San Francisco, Cal., and Hotel Biltmore, Los Angeles, Calif.

Railway Business Association.—P. H. Middleton, First National Bank Bldg., Chicago 3, Illinois. Annual dinner, November 21, 1946, Waldorf-Astoria Hotel, New York, N. Y.

Railway Club of Pittsburgh.—J. D. Conway, 308 Keenan Bldg., Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

Railway Electric Supply Manufacturers' Association.—J. McC. Price, Allen-Bradley Company, 624 W. Adams St., Chicago 6, Ill. Exhibit in conjunction with meeting of the Electrical Section of the Mechanical Division of the A. A. R., October 23-26, 1946, Hotel Sherman, Chicago, Ill.

Railway Fuel and Traveling Engineers' Association.—T. Duff Smith, Room 811, Utilities Bldg., 327 S. La Salle St., Chicago 4, Ill.

Railway Supply Manufacturers' Association.—J. D. Conway, 308 Keenan Bldg., Pittsburgh, Pa. Exhibit in conjunction with meetings of A. A. R. Mechanical Division and Purchases and Stores Division, June 23-28, 1947, Convention Hall, Atlantic City, N. J.

Railway Telegraph and Telephone Appliance Association.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with Communications Section, of A. A. R.

Railway Tie Association.—Roy M. Edmonds, 610 Shell Bldg., St. Louis, Mo. Annual meeting, September 23-25, 1947, Arlington Hotel, Hot Springs, Ark.

Roadmasters' and Maintenance of Way Association.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September, 1947.

Signal Appliance Association.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with A. A. R. Signal Section.

Southern and Southwestern Railway Club.—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

Southern Association of Car Service Officers.—D. W. Brantley, C. of Ga., Savannah, Ga.

Toronto Railway Club.—D. M. George, P. O. Box 8, Terminal "A," Toronto 2, Ont. Regular meetings, fourth Monday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.

Track Supply Association.—Lewis Thomas, O. and C. Company, 59 E. Van Buren St., Chicago 5, Ill.

United Associations of Railroad Veterans.—Roy E. Collins, 225 Bidwell Ave., Westerleigh, Staten Island 2, N. Y.

Veterans of the Military Railway Service.—Luncheon meeting, second Wednesday of each month, at 12 noon, Chicago Traffic Club, Palmer House, Chicago, Ill.

Western Railway Club.—E. E. Thulin, Suite 339, Hotel Sherman, Chicago, Ill. Regular meetings, third Monday of each month, except January, June, July, August and September, Hotel Sherman, Chicago, Ill.

Current Publications

Books

Railway Signalling and Communications; Installation and Maintenance. Second edition, 416 pages, illustrations. Published by St. Margaret's Technical Press Limited, 33 Tothill St., Westminster, London, S. W. 1, England. Price eight shillings.

The material in this book is based on lectures given to members of the staff of the signal and telegraph department in one of the areas of the London & North Eastern Railway.

Railroad Consolidation Under the Transportation Act of 1920, by William Norris Leonard. 350 pages. Published by the Columbia University Press, Morningside Heights, New York, N. Y. Price, $4.00.

This study traces the development of planned consolidation under the Transportation Act of 1920 until its termination in 1940. It includes a brief sketch of railroad consolidations in earlier periods, and an analysis of the considerations which prompted Congress to incorporate a consolidation program into the Transportation Act of 1920 and grant the railroads relief

from the antitrust laws. The Commission's efforts to carry out the Congressional mandate are discussed, as well as the progress made by individual acquisitions, the subordination of the comprehensive plan in the interests of expediency, and the general miscarriage of planned consolidation during the twenty years of its trial.

Pamphlets

Statistics on Car Building and Car Repairing, 1945, 51 pages, plus inserts. Published by the American Railway Car Institute, 19 Rector St., New York 6, N. Y. Free.

Contains voluminous statistics on freight and passenger car construction, deliveries, orders, installations and retirements, as well as related statistics on freight and passenger traffic. An important part of the publication is the section devoted to the age of freight and passenger cars. Figures are included for each Class I railroad showing the age of the cars, by types, by five-year periods. "Pie" charts summarize the figures for Class I railroads as a whole.

Freight Commodity Statistics, Class I Steam Railways in the United States, Year Ended December 31, 1945, prepared by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission, 148 pages. For sale by the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Price, $1.00.

Includes statistics on tons of freight originated and terminated, number of car loads, and freight revenue, by commodities, for the country as a whole, and for individual railroads.

The Lehigh Valley Railroad, 1846-1946; *A Centenary Addres, by Felix R. Gerard. 28 pages. A Newcome Address delivered during the "100th Anniversary Luncheon" held . . . in honor of the Centenary of the Lehigh Valley Railroad. Printed at the Princeton University Press, Princeton, N. J.*

Mr. Gerard outlines the history of the Lehigh Valley from its inception up to the present time.

Motion Pictures Owned by, or Relating to, the American Railroads Available from Railway Companies, Commercial Distributors, Educational Institutions and Industrial Firms. 27 pages. Compiled by the Association of American Railroads, Transportation Building, Washington 6, D. C. Free.

Describes briefly each of the films which are available.

Periodical Articles

Army Transportation Journal, Vol. 2, No. 8, September, 1946. Published at 930 F St., N. W., Washington 4, D. C. Single copies, fifty cents.

Included in this issue are articles on the embarkation and movement of General Patton's Task Force "A" for the invasion of North Africa; the open house held at the San Francisco Port of Embarkation, when the neighborhood was invited to see what was going on; and the technology of supply.

It Takes Railroads to Deliver in a Pinch

says

R. R. Rider

(Number fifteen of a series)

When things are running smoothly you can get along with makeshift transportation, but in an emergency it takes an organization with resources to deliver. I found that out by watching a railroad fight its way out of a mess once.

It was kind of a rough experience for me, for I had to sit in a snowbound coach for twenty hours while it went on. I'd left New York in the midst of a fairly bad snowstorm. The train was headed for Philadelphia, but was hardly across the river when the storm turned into a bad blizzard and stalled us about thirty miles out. I never saw anything like it, before or since.

Under such circumstances you'd expect lots of confusion until things got organized, but in no time at all an army of men and machines began throwing that snow around. The thing that most impressed me was the way everyone seemed to know what to do; you'd think a bad blizzard happened every week instead of once in a lifetime. While we didn't move a foot for almost a day, I was surprised that we got going so soon.

I didn't know any of the details until an official of that road told me about the storm a few years later. I mentioned how everyone had sprung into action quickly, and he explained that all they did was put a pre-arranged plan into effect. They knew they'd have a bad blizzard some time and were fixed for it. Each key man had simply to reach into his desk for a paper that told him exactly what to do; where to get men and equipment. Not a minute was wasted in planning. That storm, I was told, cost the road over two million dollars. One of the toughest jobs was feeding the thousands of extra men who worked to clear the tracks. That meant about 40,000 hot meals and coffee enough to float a ship.

Since then I've noticed that in similar emergencies it's always the railroads that get moving first; highways often stay blocked for weeks in spite of all that governmental agencies can do. That's why I say that people who think that trucks, buses, or anything else can replace the railroads should consider what may happen during emergencies. They'll soon see that only railroads deliver in a pinch.

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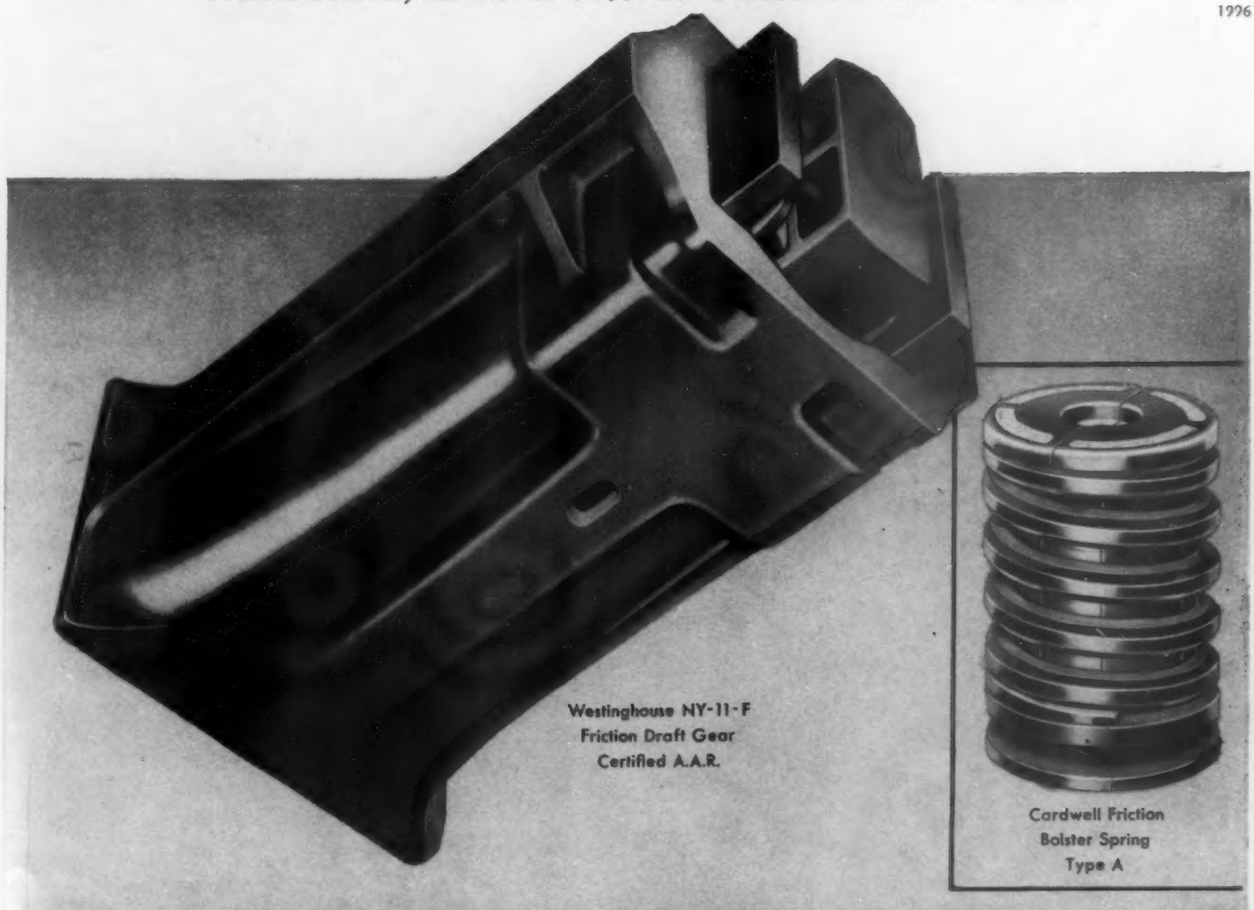

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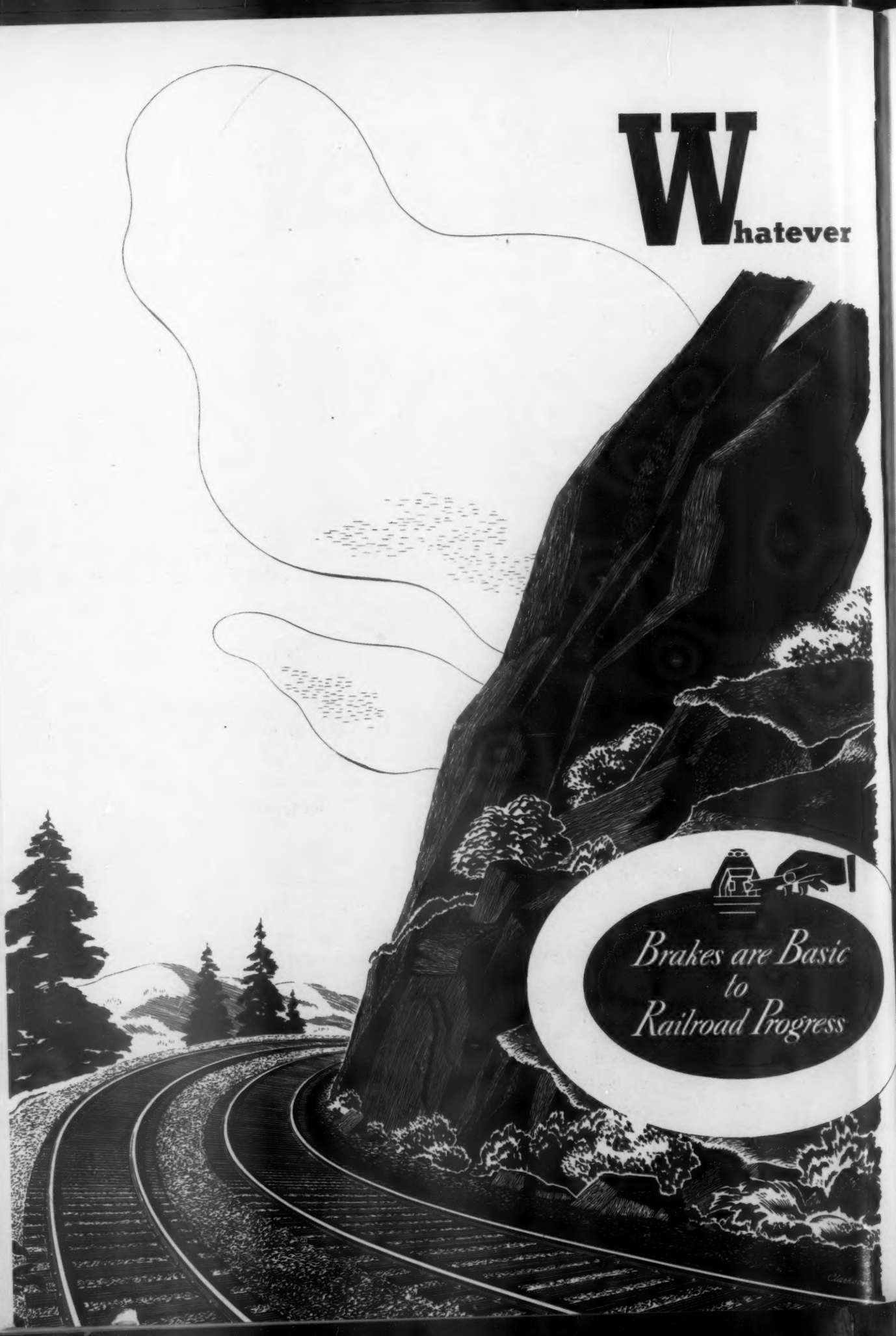
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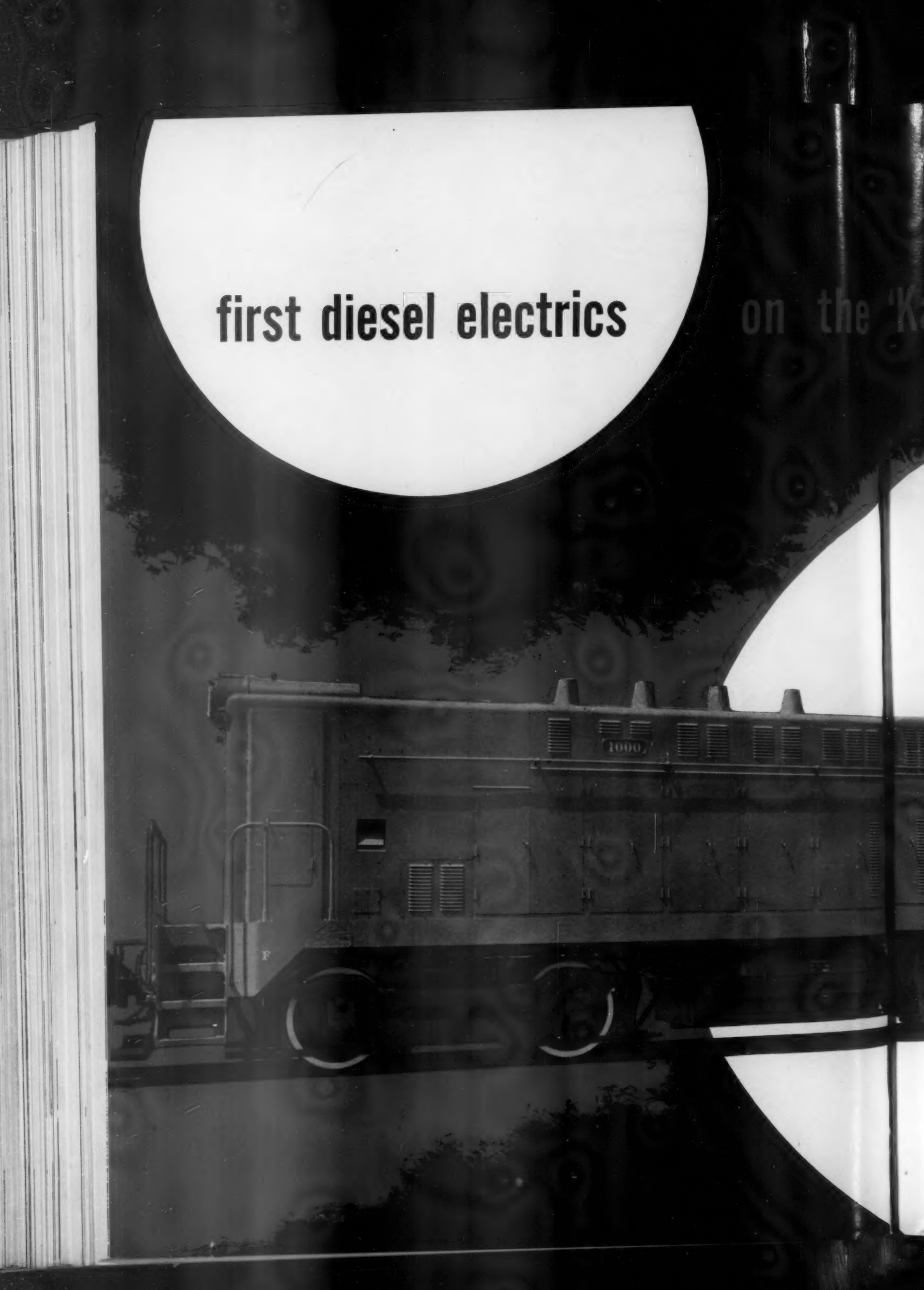
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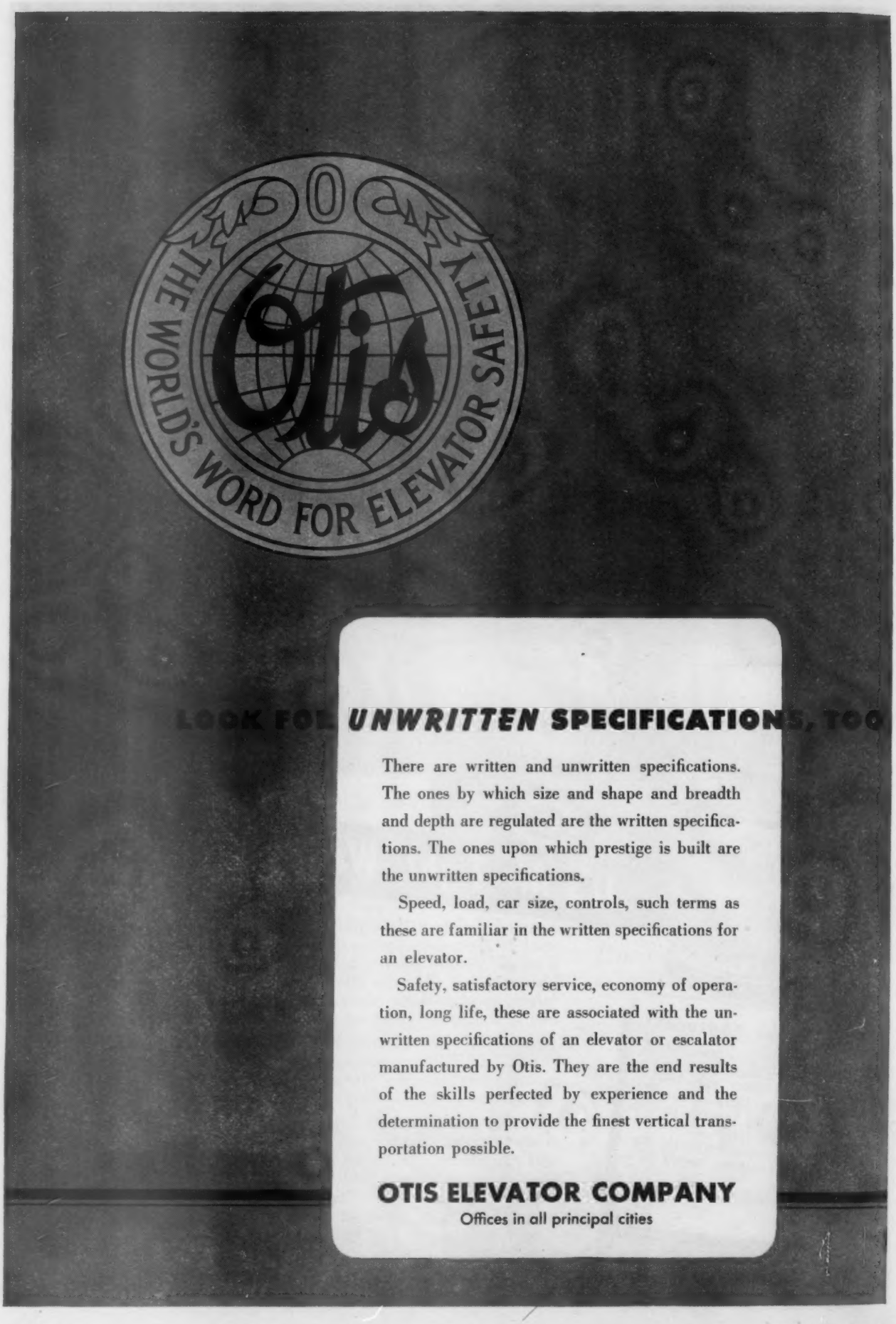
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STATEMENT of the ownership, management, circulation, etc., required by the Acts of Congress of August 24, 1912, and March 3, 1933, of *Railway Age*, published weekly, at Philadelphia, Pa., for October, 1946.

State of New York }
County of New York } ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Roy V. Wright, who, having been duly sworn according to law, deposes and says that he is the Managing Editor of the *Railway Age* and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit: .....

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, Simmons-Boardman Publishing Corp., 30 Church St., New York, N. Y.

Editor, Samuel O. Dunn, 105 W. Adams St., Chicago, Ill.

Managing Editor, Roy V. Wright, 30 Church St., New York, N. Y.

Business Managers, None.

2. That the owners are: Simmons-Boardman Publishing Corporation, 30 Church Street, New York 7, N. Y.; Stockholders of 1 per cent or more of the total amount of stock are: I. R. Simmons, 15 Hillcrest Dr., Pelham Manor, N. Y.; P. A. Lee, Hopatcong, N. J.; Henry Lee, Hopatcong, N. J.; E. G. Wright, 398 N. Walnut Street, East Orange, N. J.; S. O. Dunn, 105 West Adams Street, Chicago, Ill.; C. E. Dunn, 3500 Sheridan Blvd., Chicago, Ill.; Mae E. Howson, 6922 Paxton Avenue, Chicago, Ill.; Marie J. Bleckner, Woodbury, Conn.; Ella L. Mills or Catherin S. Mills, Westfield, N. J.; Maude E. Slate, Summit, N. J.; Frederick H. Thompson, East Cleveland, Ohio; Spencer Trask & Company, 25 Broad Street, New York, N. Y. General Partners of Spencer Trask & Company are: Edwin M. Bulkley, 817 Fifth Avenue, New York, N. Y.; Acosta Nichols, Cold Spring Road, Oyster Bay, N. Y.; Cecil Barret, Bar Harbor, Me.; C. Everett Bacon, 16 Erwin Park, Montclair, N. J.; F. Malbone Blodget, 65 Patterson Ave., Greenwich, Conn.; Arthur G. Gilbert, 440 Park Avenue, New York, N. Y.; Henry S. Allen, 407 Highland Avenue, Orange, N. J.; William Kurt Beckers, 39 E. 79th Street, New York 16, N. Y.; Edwin M. Bulkley, Jr., 40 East 66th Street, New York 16, N. Y.; Charles F. Bryan, 83 Adams Street, Garden City, L. I., N. Y.; Harold H. Cook, 259 South Mountain Ave., Montclair, N. J.; Brittin C. Eustis, Old Chester Road, Essex Fells, N. J.; Anton Henry Rice, Jr., 1 Riverview Road, Irvington-on-Hudson, N. Y.; J. Streicher & Company, 2 Rector Street, New York 6, N. Y.; Partners of J. Streicher & Company are: Joseph Streicher; Ethel Streicher; and J. L. Streicher, all of 2 Rector Street, New York 6, N. Y. Ingalls & Snyder, 100 Broadway, New York, N. Y. General Partners of Ingalls & Snyder are: Warner W. Kent, Samuel H. Watts, Ralph P. Hinchman, Jr., Daniel S. Monroe, Thorvold H. Tenney, John W. Easton, Chester C. Beldran, all of 100 Broadway, New York, N. Y.

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4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fire owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown above is 9563. (This information is required from daily, tri-weekly, semi-weekly and weekly publications.)

ROY V. WRIGHT.

Sworn to and subscribed before me this 25th day of September, 1946.

EDMUND J. PUYDAK.

[SEAL] (My commission expires March 30, 1947)

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October 12, 1946

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